



OTP2 Reference Guide - Tech course for managers tier 2

Technology (McDonald High School)



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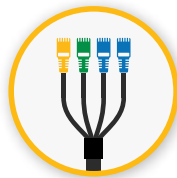


OTP2 Reference Guide

Choose a topic to learn more:



Network 2.0



Cabling 201



Manager's Office



Registers



Kiosks



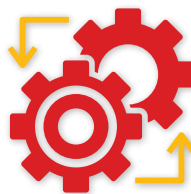
Dual Point 2.0



Controllers



Cashless



Software



Misc. Equipment



Troubleshooting



Network 2.0

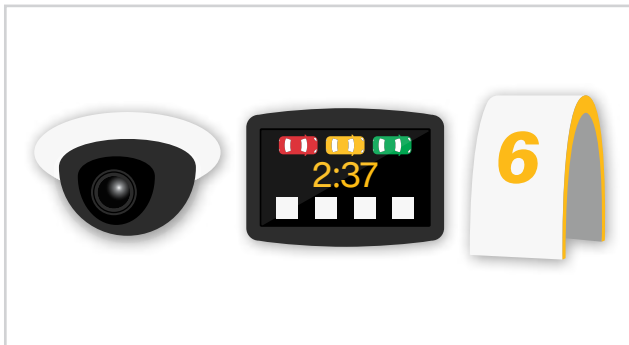
Network 2.0 uses updated network equipment in the Manager's Office. This new equipment allows all devices to communicate and work together. First, let's get an understanding of what are network devices and which devices are not on McDonald's network.

POS Network Devices



- Controllers
- Registers
- Servers
- Kiosks
- e*SmartClocks

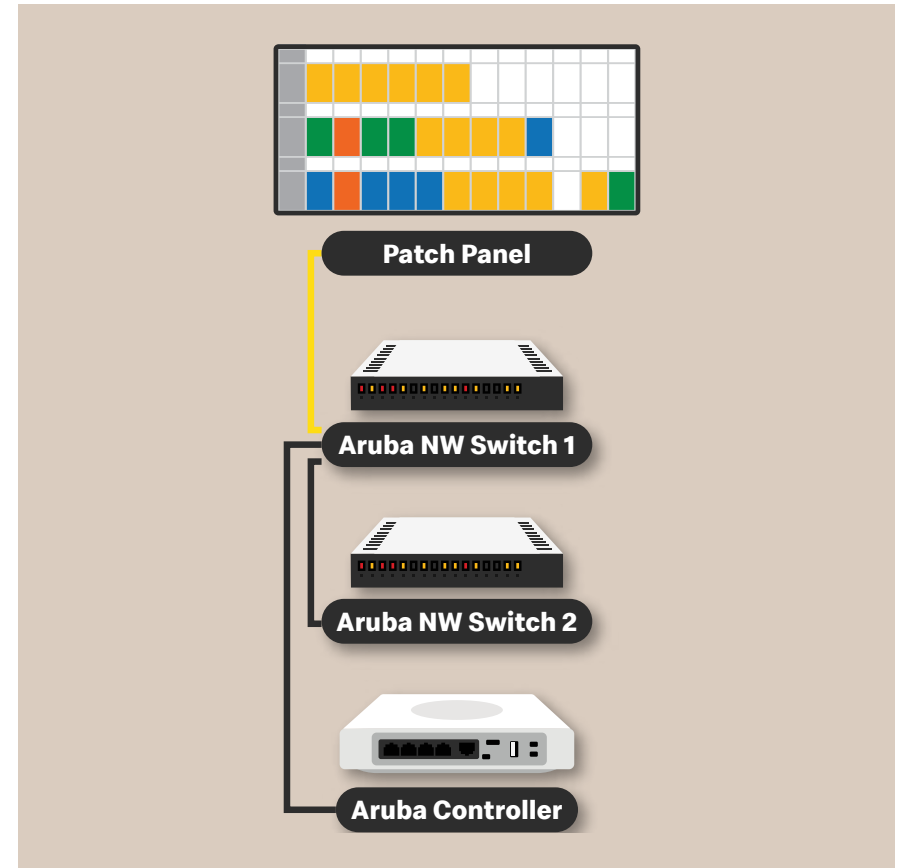
Non-POS Network Devices



- Camera System
- Drive Thru Timer
- Table Locator System

Network 2.0 Equipment Connections

Below is an overview of the equipment and their connections in a Network 2.0 configuration.





Rebooting Equipment

There are two ways you can reboot equipment:

- **Powercycling:** When power cycling a device, press and release the Power button for one second.
- **Going through the POS Manager's menu:** Some devices can be rebooted using the Manager's Menu on the registers. Reach out to your OTP Pro to learn how to complete this. **Note:** Never reboot the Aruba Gateway Controller or Network Switches unless directed to by Support.

IP Addresses

IP stands for Internet Protocol. Most devices within a restaurant will have two separate IP Addresses: a Local and a Global IP Address. They are used for network communication between devices both inside and outside the restaurant.

Octets

IP Addresses follow the format of 'w.x.y.z'. These variables are separated by a dot (.) which divides the IP addresses into four numbers called octets.



Local IP Addresses

These follow the format of 10.0.0.z for all devices with a local IP. The first three octets are always 10.0.0 and the last octet, 'z', is the device ID number. (For example, Register 1's local IP address is 10.0.0.1) All devices within the restaurant communicate with each other via the local IP address. The local addresses do not broadcast any information outside the restaurant; they are used for devices to communicate within the restaurant. These local IP addresses would not affect any other restaurants. This means that every Register 1 in every restaurant has the same Local IP address: 10.0.0.1.



Global IP Addresses

These addresses DO broadcast outside of the restaurant. The first octet, 'w', is always the number 10. The two middle octets (x and y variables) are unique and will vary from restaurant to restaurant. No two restaurants will have the same 'x' and 'y'. If they did, that would cause conflicts and issues for those restaurants. The last octet, 'z', is the device ID number for the specific device. This number can be found in the table below.

Note: If the Global IP Address is incorrectly set up, it would not communicate properly outside of the restaurant. This could lead to failed upgrades or failure to apply RFM packages.

X and Y Octets

As we said previously, no two restaurants will have the same set of x and y numbers. This is how each restaurant is uniquely identified on the McDonald's network (NAR domain) and is used for various reasons. Support can gain access to a specific restaurant or device using this IP Address. In addition, it is used to apply RFM packages or remote software upgrades and patches. These two octets can be found in several areas such as RRM, Waystation VM Desktop, Waystation Webpage, and the AWE Portal.



IP Addresses (Continued)

Local & Global IP Addresses by Device

Device	Global IP	Local IP
CIT	10.x.y.24	10.0.0.24
BOS	10.x.y.51	10.0.0.51
Waystation VM (POS Server)	10.x.y.25	10.0.0.25
RHS (Windows Server 2012)	10.x.y.85	10.0.0.85
Registers 1 thru 15 (Includes Kiosks 6-11)	10.x.y.Register # / 10.x.y.Kiosk #	10.0.0.Register # / 10.0.0.Kiosk #
KVS Controller #1 - #6	10.x.y.31 – 10.x.y.36	10.0.0.31 – 10.0.0.36
KVS Controller #7 - #15	10.x.y.67 – 10.x.y.75	10.0.0.67 -10.0.0.75
PED #1 - #13	10.x.y.(90+ Device#)	No local IP
Kiosk PED #6-#11	10.x.y.96-10.x.y.101	No local IP
Wireless PED #1 & #2 (e285)	10.x.y.131 & 10.x.y.132	No local IP
DT PED #13 (p400)	10.x.y.103	No local IP
Equinox 151 Serial Hub		10.0.0.151
Moxa Serial Hub	10.x.y.74	No Local IP
DT Lane 1 & 2 Cameras		10.0.0.61 & 10.0.0.62
BOS Printer		10.0.0.90
ORB Controller #1 & #2	10.x.y.26 & 10.x.y.27	10.0.0.26 & 10.x.y.27
HHOT #1 & #2	10.x.y.37 & 10.x.y.38	10.0.0.37 & 10.x.y.38
COD 1 & 2 (LAN based)		10.0.0.131 & 10.0.0.132
COD 1 & 2 Server		10.0.0.133 & 10.0.0.134
eProduction 1 & 2	10.x.y.40 & 10.x.y.41	10.x.y.40 & 10.x.y.41
IDMBs:	10.x.y.162 -10.x.y.167	10.x.y.162 -10.x.y.167
ODMBs:	10.x.y.168 – 10.x.y.173	10.x.y.168 – 10.x.y.173
Smart Time Clock	10.x.y.81	10.0.0.81
ABS 2.0	Drive Thru : 10.x.y.88 Front Counter: 10.x.y.89	No Local IP

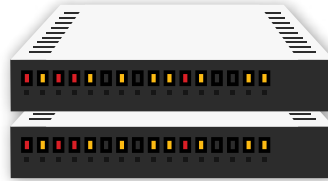


Critical Equipment in Network 2.0 Solution

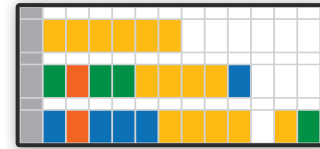
Tap a piece of equipment to learn more about it.



Aruba Controller



Aruba Network Switches



Patch Panel



WBU



Access Points



Aruba Gateway Controller

The Aruba Gateway Controller allows your restaurant to communicate with the internet. It allows outbound network traffic and prevents unauthorized incoming network traffic. It typically sits beneath the two Aruba Network Switches in the Manager's Office.

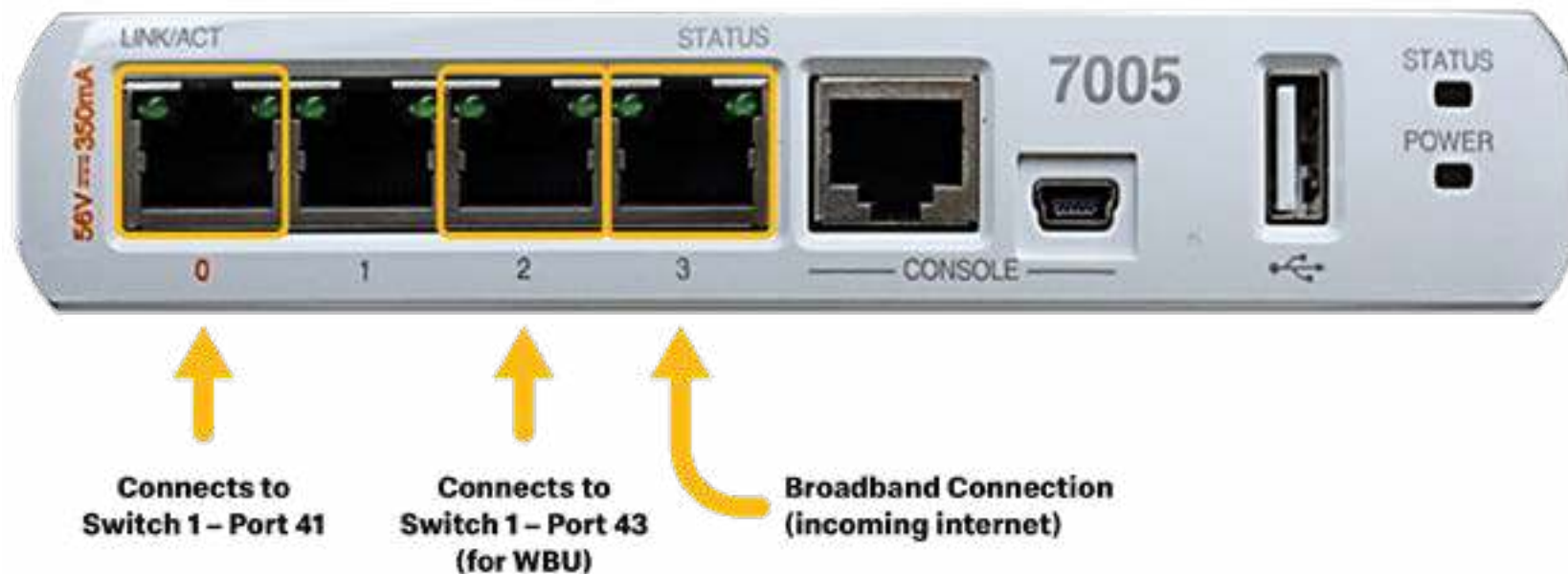
Here's the Port configuration:

Port 0: Switch 1 – Port 41

Port 1: Unused

Port 2: Switch 1 – Port 43 (for WBU)

Port 3: Broadband connection (incoming internet)





Aruba Network Switches

The Network 2.0 Solution uses two 48-port Aruba Network Switches. All 48 ports work at 1 Gigabit speed and provide Power over Ethernet (PoE+). The switches use software to manage the ports in a very specific way. This setup requires two 48-port Aruba Switches. Each port is programmed to support a specific device type, making this a truly managed solution. Switch #1 is at the top above Switch #2. Ports 1-4 are static ports (designated for specific devices). Ports 5-40 are dynamic ports and are used for any of the devices listed below.

Switch #1:

Port 1: RHS

Port 2: BOS

Ports 3 and 4: Drive Thru Cameras

Port 5-40:

- POS Core Devices (Start with Port 5 and use as many as needed. Use the recommended order: Registers, Kiosks, KVS Controllers, and ORB Controllers)
- PEDs – Picks up at port next to last used by POS Core Device
- DMBs (Indoor and Outdoor) – Continue with the port following the last PED

Port 42: Access Point #1

Port 44: Access Point #2

Port 45: Uplink to Switch #2

Port 47: Wireless Back Up (WBU)

Note: Continue to Switch #2 if ports fill up in Switch #1

Switch #2:

Port 2: POS Serial Hub for Legacy devices (KVS, ORB, ePR)

Port 3: BOS Printer

Ports 5-40: Any remaining equipment

Port 42: Access Point #3

Port 45: Uplink to Switch #1





Patch Panel

Another key piece of the network infrastructure is the 72-port Patch Panel. This is a **central hub** where all the network connections from the Point of Sale (POS) equipment come together.

This typically sits at the top of the technology rack. Color-coded cables run through Biscuit Boxes and wall plates (with color-coded jacks) throughout the restaurant connecting to various devices.

The **Patch Panel** is one endpoint of physical network connection that is close in proximity to the network device. The other connection endpoint is a **Biscuit Box**.



Port	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Device	FC POS1	FC POS2	Delivery	KIOSK POS6	KIOSK POS7	KIOSK POS8	KIOSK POS9	DT POS12	DT POS13	DT POS14	DT POS15	DT Camera 1	DT Camera 2											
Port	25	26	27	28	29	30	31	28	29	30	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Device	FC PED1	FC PED2	Radius	KIOSK PED6	KIOSK PED7	KIOSK PED 8	KIOSK PED9	DT PED13	DT PED15	KVS1	KVS2	KVS3	KVS4	FC Pickup Area Spare	FC Pickup Area Spare									
Port	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72
Device	FC POS1 Spare	FC POS2 Spare	Dual Point	KIOSK POS6 Spare	KIOSK POS7 Spare	KIOSK POS8 Spare	KIOSK POS9 Spare	Spare Reg 12/13	Spare Reg 14/15	KVS Spare (3)	KVS5 (EDAP)	KVS6 (BDAP)	KVS7 (HOTG)	ABS 2.0	ABS 2.0 Spare								NMD POS	NMD Cashless

Note:

The cables that run from the biscuit boxes to the back of the patch panel are the HomeRun cables.

HomeRun cables are not color-coded, but the patch cables that plug into the front generally are.



WBU (Wireless Backup Unit)

This device uses 4-G cellular technology to provide internet when the primary internet service is disrupted for any reason. The WBU is usually mounted above the ceiling near the technology rack and may be attached to a rafter.



Access Points

There are three Access Points in this solution. These allow for Wi-Fi to be present in and around the restaurant. They broadcast the McDonald's Free Wi-Fi and eBOS networks.

- AP1: Located in the Lobby area
- AP2: Typically located outside the Manager's Office
- AP3: Typically located near the back of the building near the Drive Thru lane

Note: AP1 and AP2 may be mounted above or below the ceiling.



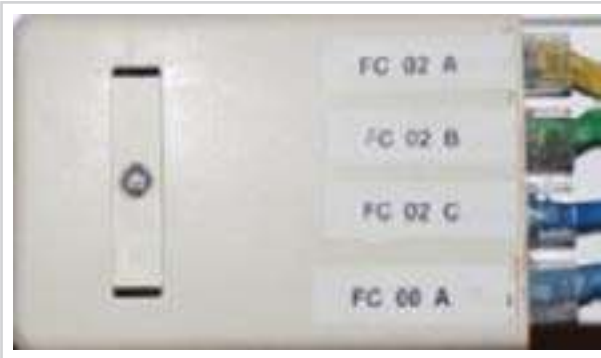


Cabling 201

Knowing the cables used in the restaurant and how they connect the devices, is an important part of being an OTP2. This section of the guide will provide comprehensive information on cabling.

Cabling Standards

First, look at the jacks on the Biscuit Boxes in your restaurant to learn which cabling standards you use. This also reinforces how important labeling is for cabling to make sure devices are properly connected.



If you have **letters and numbers** on the jacks, you have **2016 standards**.



If you have **just numbers** on the jacks, you have **2018 or newer standards**.

OTP1 Refresh

In OTP1, we shared some best practices on cabling, but kept it at a very simple level as OTP1s do not have much responsibility with cables. Here's a recap of what was covered:

As you complete your Weekly Tech Travel Path (WTTP) each week, check the cables to ensure that they are properly managed. Improper cable management can cause many issues, including lockups, data loss or corruption, and hardware damage. These problems can negatively impact operations, crew morale, and customer satisfaction.

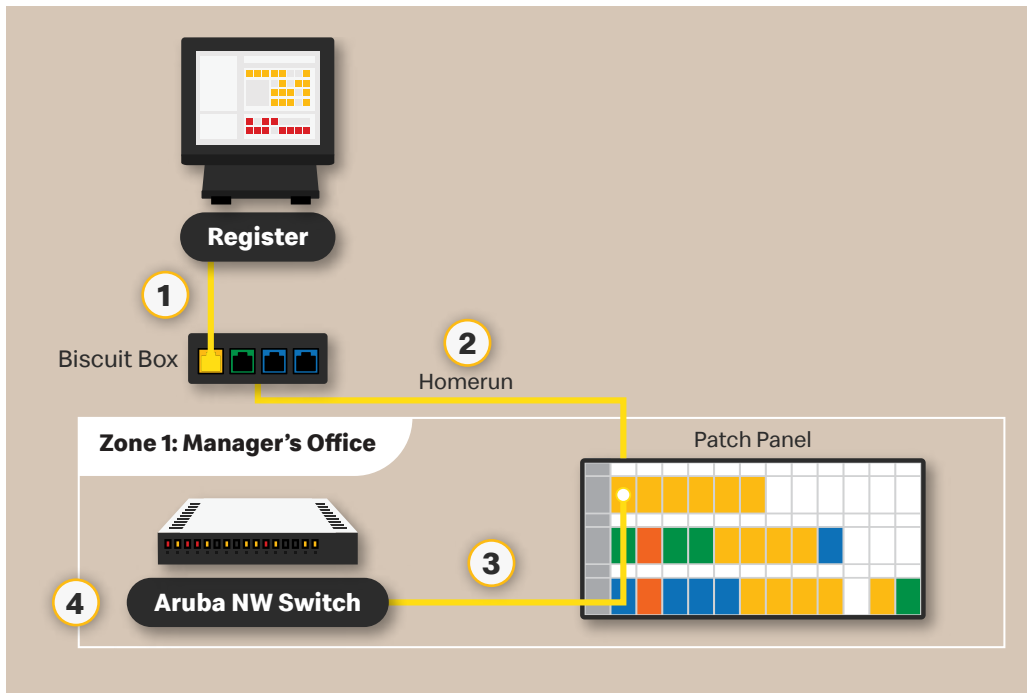
For general cable management:

- Use Velcro wrap/ties
- Keep the power and network cables wrapped separately



Overview of Restaurant Device Connectivity

The devices throughout your restaurant utilize several different cables to connect to the Network Switch in the Manager's Office. They use patch cables to connect to a Biscuit Box, then a Homerun cable to connect to the Patch Panel and a patch cable to connect to the Network Switch. Here's an example using a Register.



- 1 The register communicates to the Biscuit Box at the Front Counter through a Patch Cable.
- 2 The Biscuit Box transfers the signal through a Homerun Cable that runs through the ceiling or wall to the back of the Patch Panel in the Manager's Office/Back Office.

The Patch Panel then connects to the Network Switch using an

- 3 additional Patch Cable.

The Network Switch allows the devices to talk to

- 4 each other.

Note: If a device is located close to the Network Switch, it may connect to it directly. This only applies to specific devices.

In addition, Digital Menu Boards connect directly to the Network Switch.

For more information, see the *US Cabling Standards Document* for the year of your cabling standards.



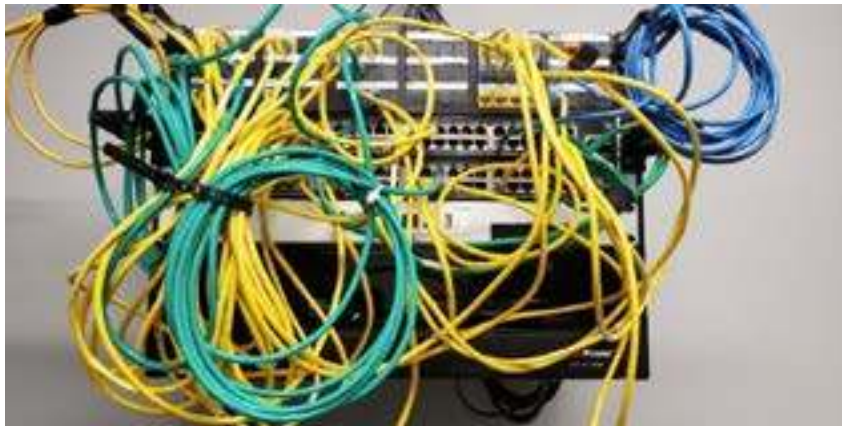
Cable Management Tips

Cable management issues can cause premature failure of devices or cause unwanted interruption to the POS System.

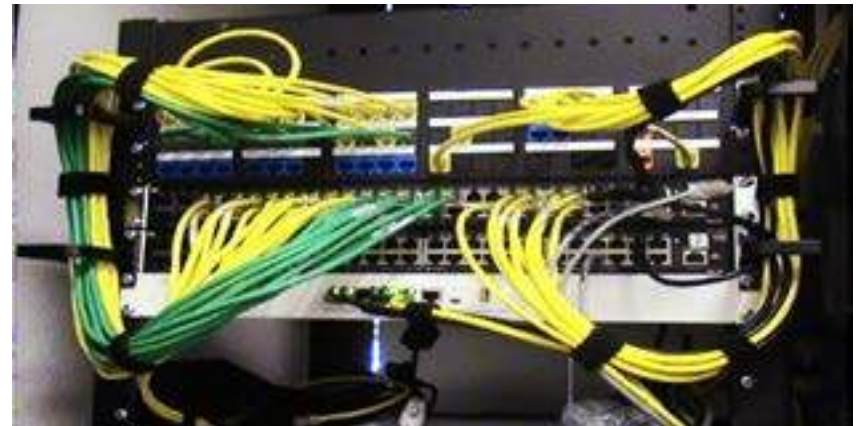
Follow these tips on how to properly manage cables:

- Cable should not have excessive tension
- The bend radius of the cables should be 45 degrees or greater.
- Do not route data cables and power cables together.
- Cables under counter should be bundled at least 23 inches from the ground.
- Use Velcro ties to bundle cables.
- Always use “Service/Drip Loops” at biscuit boxes.
- Use D-Rings for patch cables and Panduit Raceways when routing data cables.
- Use the proper color cables for the device type being used.
- Yellow for POS Network
- Green for PED Network
- Blue for spare or optional devices
- Orange for non-switched connections
- Label devices and both ends of cables

Incorrect Cabling



Correct Cabling



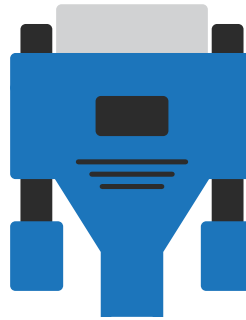


Cable Types

There are three different categories of cables for our restaurants: Data, Video, and Printer cables. Tap on a cable below to go to its image and information. Or scroll down for more information.



Data Cables



Video Cables



Printer Cables



Data Cables



Ethernet – RJ45 Cable

Used to send data and ethernet signals around the restaurant. Ports on devices have Link/Activity lights when connected

Here are the different colors used for different devices:

- Yellow – POS Devices
- Green – PED Network
- Blue – Spare Devices
- Orange – Non-switch Connections



RJ14 Cable

This cable sends non-ethernet data to devices, like BumpBars, A/B Boxes, Cash Drawers, and Coin Changers. It looks like a telephone cable.



Serial/BumpBar Cable

This cable converts serial data and USB power into the RJ14 end for BumpBars. The serial connection provides data and the USB provides power.



Video Cables



VGA (Video Graphics Array) Cable

This cable sends and receives video signal.

The two types of adapters below may be used with a VGA Cable:



Display Port to VGA Adapter

This converts Display Port output to VGA for monitors. It is used with Dell WYSE, HP, Lenovo and NCR Controllers.



Printer Cables



USB to Parallel Cable

This is used on some registers and controllers to convert USB printer signals to a parallel printer.



USB A to USB B Cable

This cable is used on some registers and controllers to send USB printer signals to a USB printer. It may also be used to enable the touch functionality on touch screen monitors and to supply power to USB Extenders.



Manager's Office

The Manager's Office is considered the tech hub of the restaurant because so many key pieces of equipment can be found here. In addition, other pieces of equipment all over the restaurant connect to equipment here, like the Restaurant Host Server (RHS).

Key Equipment

- BOS (Back Office Server)
- RHS (Restaurant Host Server)
- Serial Hub
- UPS (Uninterrupted Power Supply)
- KVM (Keyboard Video Mouse) Switch
- Office Printer

Rebooting Equipment

- **Powercycling:** When power cycling a device, press and release the power button for one second to avoid corruption.
- **Going through the POS Manager's menu:** Some devices can be rebooted from a register. See your OTP Pro if you do not know how to do this process.

OTP1 Refresh

In OTP1, you learned about the equipment in the Manager's Office or Zone 1. Here's a list of some additional equipment found in this zone:

- **Inventory Recorder:** It is connected to the BOS with a USB 2.0 port. Manager's use this device to record inventory quicker and more accurately.
- **Aruba Controller:** Also known as a gateway, this device controls network traffic flowing in and out of the restaurant.
- **Aruba Network Switches:** Provide the Wi-Fi network for your restaurant so devices can connect to the internet and communicate with each other. This works as your Local Area Network (LAN) and the switches are Powered over Ethernet (PoE+), meaning power is sent by ethernet cables with data.
- **Managed Tablet:** Used for restaurant responsibilities including but not limited to: training, recording food safety, etc
- **e*SmartClock:** Allows Crew and Managers to clock in and out for shifts
- **Biometric Reader:** Allows users to scan their fingerprint for identification and to log into other devices. This zone will most likely have two scanners; one connected to the e*SmartClock and the other to the BOS for POS Biometrics manager fingerprint enrollment.
- **HHOT (Handheld Order Taker) and Charging Dock:** Also known as Mobile Order Taker (MOT), this tablet connects to the NP Webview instance on the Waystation VM to allow restaurant staff to take orders.
- **DSI/Broadband Modem:** Provides the broadband connection to the restaurant
- **WBU (Wireless Backup Unit):** Uses 4G mobile technology to provide backup internet service if the primary internet service is not working properly
- **Patch Panel:** Connects equipment via 72 ports. It is typically located on a stationary 82" network rack or a wall-mounted rack in the office. Patch cables connect to the Patch Panel and to the POS Network Switch. Homeruns are connected to the back of this and run through ceiling and into the back of Biscuit Boxes

Note: Registers connect to the Manager's Office through a cable that goes through a Biscuit Box. The Biscuit Box transfers the signal through a homerun cable to the back of the Patch Panel, which connects to the Network Switch allowing all devices to communicate through an additional patch cable



Manager's Office Equipment

Tap a piece of equipment to learn more about it.



BOS

(Back Office Server)
Lenovo TS150 (only BOS)
Dell T140



RHS

(Restaurant Host Server)
Dell T130 (only RHS)
Dell T140 (also used for BOS)



Serial Hubs



UPS

(Uninterrupted Power Supply)



KVM Switch

(Keyboard Video Mouse)



Back Office Printer



BOS (Back Office Server)

This server runs Cash and Inventory (C&I) programs on a cloud-based application. This program:

- Allows managers to perform tasks like the Point of Sale (POS) system Open/Close, safe counts, drawer count downs and skims.
- Manage inventory via waste entries, transfers, and physical inventory counts.
- e*Timekeeping (a feature of e*Restaurant), communicates through the BOS with the e*SmartClock and allows managers to edit time punches.
- Managers can also view and print reports from various applications accessible from the BOS.
- Houses OTP related tools such as Cellphie and Manager Config tool.

You will find the BOS to the left of the RHS on the Technology Rack.

BOS Cables & Connections

The BOS has a power cable and a network patch cable that connects to the top network port on the server via Switch 1, Port 2.

Typically, the BOS connects to PC1 on the KVM Switch. To work properly, the server must be connected to the KVM Switch using a VGA-A/B combo cable that comes with the Switch.

The Windows 2012 network patch cable connects to the top network port on the Server.

Note: The BOS can run on Windows Server 2012 or 2016, depending on the hardware model.

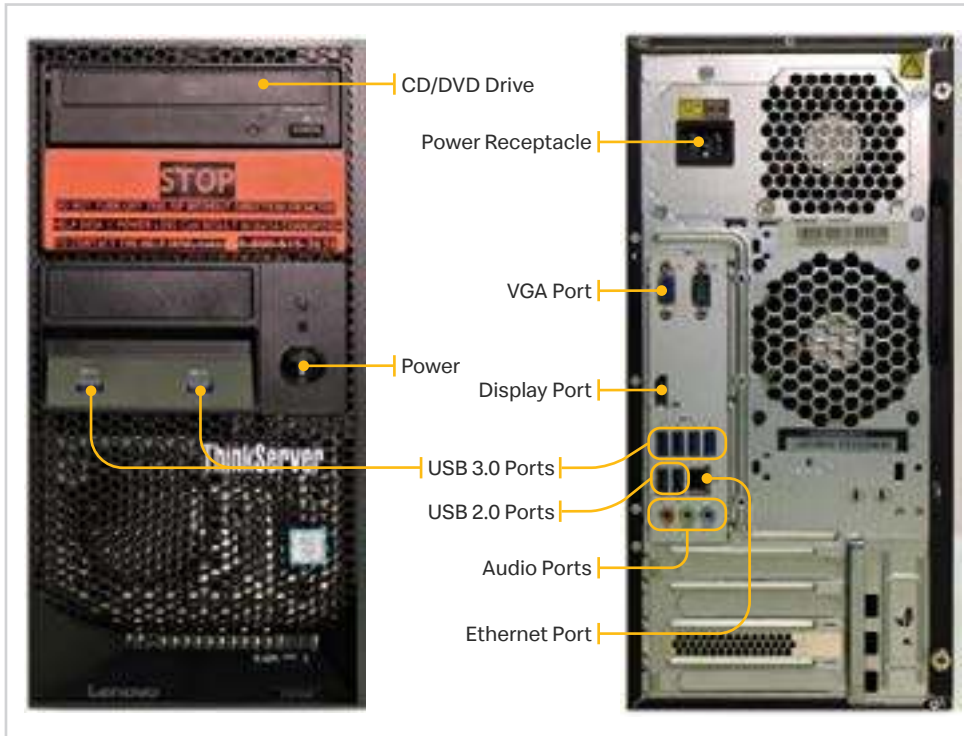
Cellphie

- Use to perform tasks such as rebooting the Waystation VM
- Cellphie Touch Screen Calibration Utility
 - Can be used to calibrate touch screens
 - Can be used if the mini-orb monitor is not functioning properly





Lenovo TS150



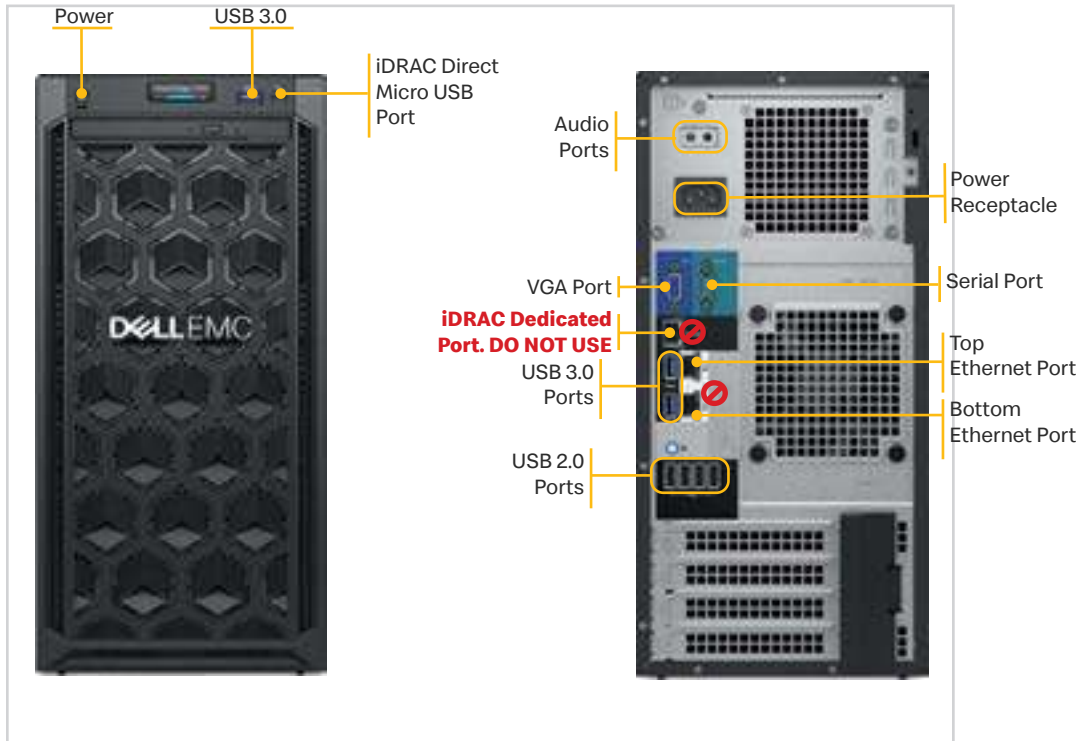
Lenovo TS150 Features:

- Only 1 Ethernet Port
- ONLY used as BOS, cannot be used as an RHS
- 2 – USB 3.0 ports located on front middle
- 32 GB of RAM memory

Helpful Hint: Move the mouse to wake up the screen for both the BOS and the Waystation VM.



Dell T140



1. iDRAC dedicated Port: **DO NOT USED**
2. Bottom Ethernet Port: **DO NOT USE** – This port is inactive
3. **Top Ethernet Port:** This port would be used when the RHS is running Windows Server 2012

Dell T140 Features:

- The patch cable connects to the top Ethernet port
- Two Ethernet ports and an iDRAC port
- Only used as an RHS, cannot be used as a BOS
- 64 GB of RAM memory
- Three (3) 1 TB SATA Hard Drives



RHS (Restaurant Host Server)

This server hosts the Waystation VM, which runs Primary Production, the Waystation application and other important NewPOS applications.

- Production application: Routes orders to the KVS, EXPO monitor and ABS
- Waystation Application: Allows POS devices to communicate with each other and the BOS

In most restaurants, the RHS should be located to the right of the BOS on the Technology Rack.

RHS Cables & Connections

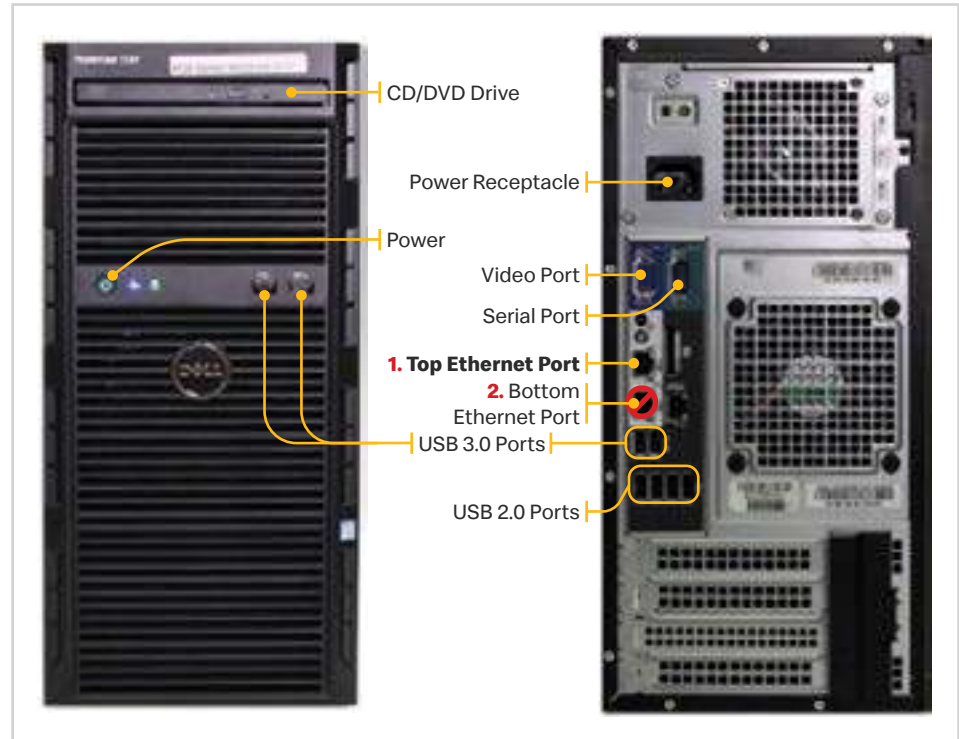
The RHS has a power cable and a network patch cable that connects to the top network port on the server via Switch 1, Port 1.

The RHS typically connects to PC2 on the KVM Switch using a VGA-A/B combo cable that comes with the Switch.

The Windows 2012 network patch cable will connect to the top

Note: The RHS runs on the Hyper-v server operating system.

Dell T130



1. Top Ethernet Port: This port would be used when the Waystation VM is running Windows Server 2012

2. Bottom Ethernet Port: DO NOT USE

Dell T130 Features:

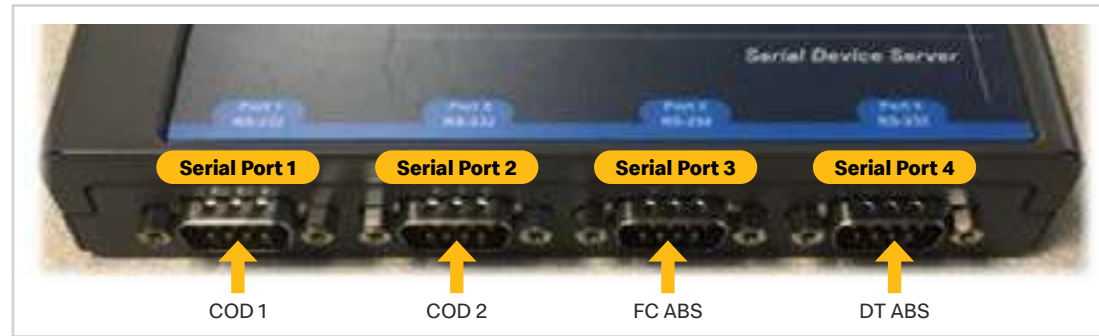
- Only used as a Waystation VM, RHS cannot be used as a BOS
- 32 GB of RAM memory



Serial Hubs

The Point-of-Sale Serial Hub is the interface that transmits beverage data to the Automated Beverage System, ABS 1.0. It also sends data to legacy CODs 1 and 2.

Moxa Serial Hub



The Moxa serial hub is compatible with Windows 7 and 10 operating systems and allows data to communicate with Legacy devices.

The Moxa has four (4) serial ports that are numbered in order from left to right.



The Moxa serial hub will have a global IP address of 10.x.y.74 where the serial hub had a local IP address. The Moxa will drive the CODs (COD 1 and COD2).

Equinox Serial Hub on next page.



UPS (Uninterrupted Power Supply)



The UPS provides backup power in the case of a power outage. If that does occur, the UPS provides enough battery time, roughly 30 minutes, to properly shut down both servers.

Several pieces of equipment are linked to this device, including:

- BOS
- Info Recorder
- RHS
- BOS Printer
- POS Serial Hub
- Office Monitor
- KVM Switch

Please note, older UPS's are color-coded but the ones from NCR are not.

If you have a color-coded UPS, each piece of equipment must go into the correct color-coded outlet. If things are not plugged into their proper outlet, it could drain the power of the UPS and make it less effective in an emergency.

It's very important to note the two outlets to the right of the main UPS power supply are not battery protected. The Back Office Printer should plug into the purple outlet.

They should be connected as follows:

- Blue – Info Recorder
- Brown – KVM Switch
- Yellow – BOS
- Green – Main Office Monitor
- Red – RHS
- Orange – empty
- Purple – BOS Printer
- Silver – empty

Be sure to connect a USB A to USB B cable between the white USB B port on the UPS to an open USB port on the BOS.

The typical life span of a Tripp-Lite battery is three (3) years.





KVM (Keyboard Video Mouse) Switch

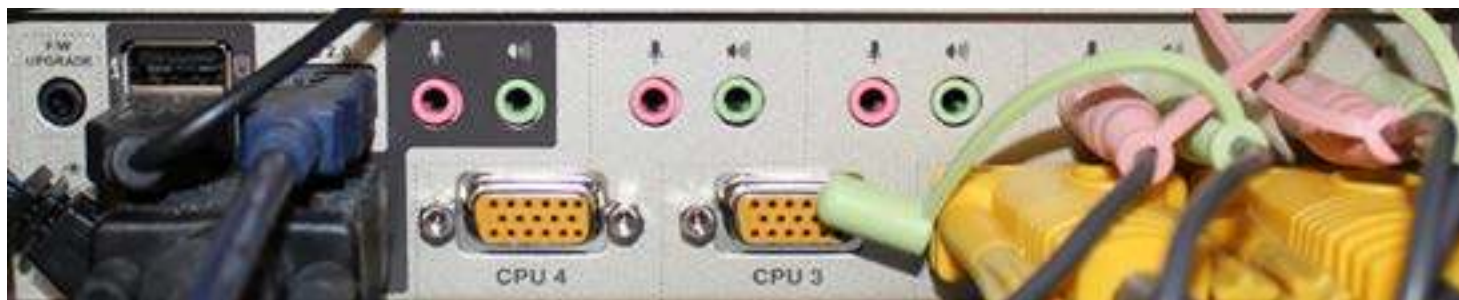
The Keyboard Video Mouse Switch will be located near the BOS and RHS servers. It allows for one keyboard, one video monitor and one mouse to be shared by up to four different computers. However, it is typically used for only two computers, the BOS and RHS.

Depending on what model you have, the KVM Switch may have four buttons on the front to manually switch between computers. On the back, there are four sets of ports for four different PCs to connect to. Typically the BOS connects to PC1 and the RHS connects to PC2.

Special cables: The video cable connects to the video port and the USB A cable to an open USB 2.0 port. It may also have audio cables at this end that connect to corresponding ports.

The main monitor that is shared between the BOS and RHS connects via a VGA cable to the back of the KVM Switch.

The Keyboard and Mouse connect with USB cables either to the front or back of the KVM switch, depending on the model.





Back Office Printer



The Back Office Printer is used to print reports and connects to the network via port 3 on Aruba Switch 2. It plugs into the purple colored (Non-battery protected) outlet on the UPS.

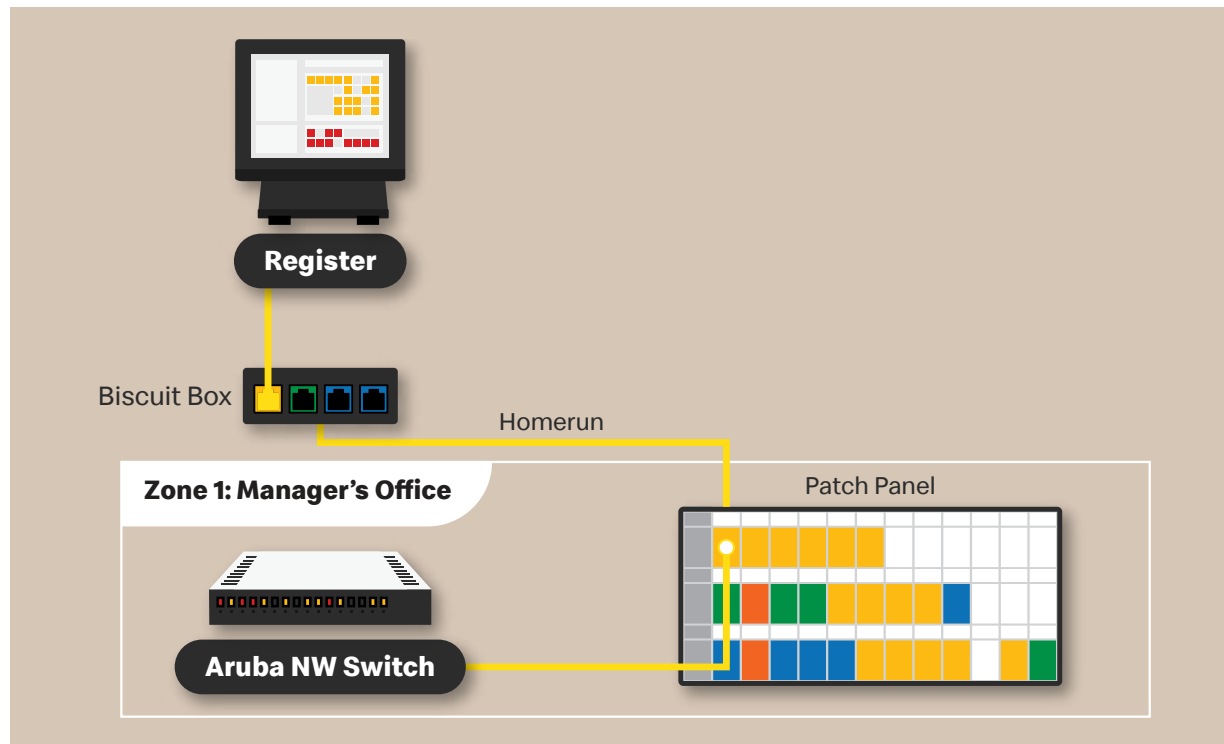


Registers

The Registers have peripheral devices such as printers and biometric readers. For example, Mobile Offer Scanners, Biometric Readers, and most customer displays connect to registers with USB cables. Also, most printers are connected to the register via a USB to parallel converter, but you may also see a parallel or USB cable used. Understanding the different variations of register connections is important when troubleshooting.

Connecting to Equipment in the Manager's Office

The Register connects to the yellow port on the Biscuit Box through a patch cable. The Biscuit Box transfers the signal through a homerun cable that runs through the ceiling or wall to the back of the patch panel in the Manager's Office. Another patch cable connects the Patch Panel to the Network switch in the Manager's Office.



OTP1 Refresh

- Register 1 serves as a failover to many processes of the Waystation VM, including Backup Production.
- Register 13 functions as a cashier. This register allows an employee to pay out an order on the register and is the busiest register in Drive Thru.
- Payment Entry Devices, or PEDs, do not directly connect to the Register. Instead, they connect to a Multiport cable that connects to the POS Network via a green patch cable plugged into the green port on the Biscuit Box. The PED connects to the NewPOS software via a process called pairing, which you can learn about in the Cashless module and section in this Reference Guide.

Additional Resources for Registers

Register Replacement Portal Video:

<https://otp.mcd.com/video/578/view>



Restaurant Registers

Tap a Register to learn more about a particular model.



Panasonic JS-970



PAR EverServ 8315



PAR ES650



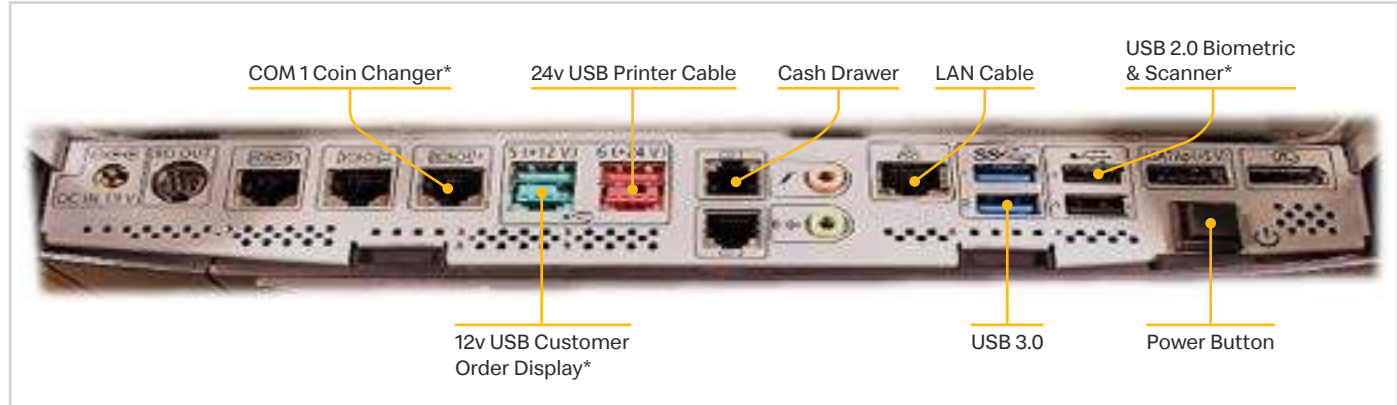
NCR CX7



NCR XR7



Panasonic JS-970



*Optional

Register Details:

- The Customer Display requires an extension cable when installed in a MFC 1.5 (Modular Front Counter).
- Only use a Panasonic Cash Drawer with this register.

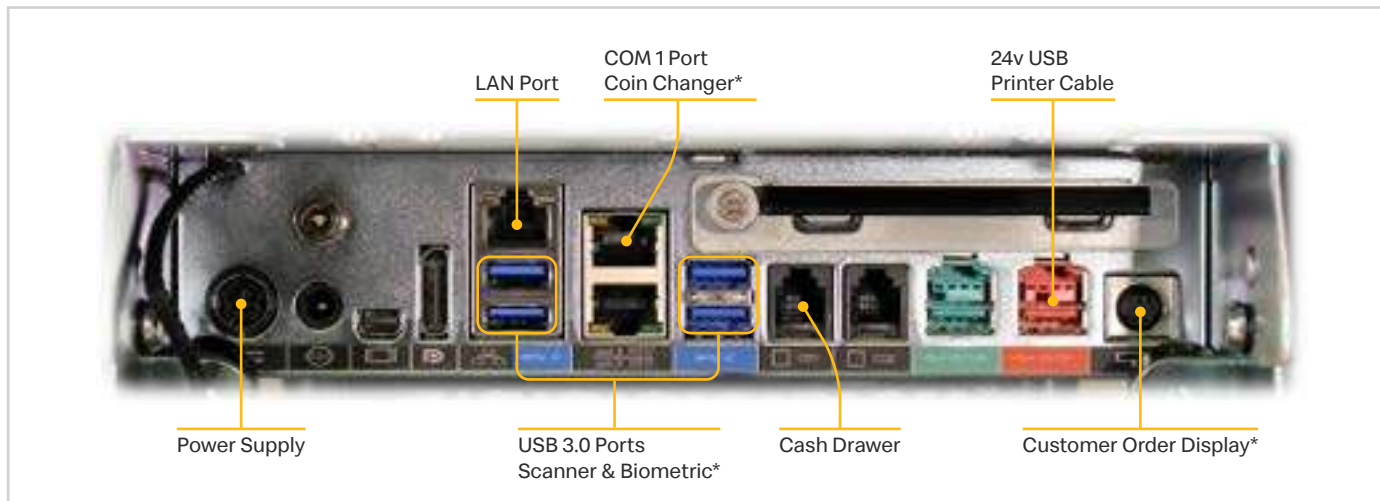
Note: 12v Cash Drawers require a modular 5-pin DIN Conversion Cable (PN#JS-970KMC010).

- For information on the coin changer, please click this link: <https://otp.mcd.com/documents/79dd9b60-5fd0-4a83-aa5e-b77d3808f31a/download>
- The printer, mobile offer scanner, and biometric reader connect to the register's USB ports.
- Mounting brackets are available for the biometric reader.
- The power brick is external to this register.

Note: This device is compatible with Windows 10 Operating Systems.



Par EverServ 8315



*Optional

Register Details:

- The Customer Display requires an extension cable.
- This register connects to these cash drawer models:
 - APG Cash Drawer: Models 101A and 102A, both of which require an RJ14 to RJ14 connection.
 - PAR Cash Drawer: This equipment connects with an RJ11 to RJ45 connection.
- Coin Changer: The register and coin changer connect with a directional RJ45 cable. The end labeled POS connects to COM1 on the register while the end labeled COIN DISP goes to the coin changer. For more information, please click this link: <https://otp.mcd.com/documents/79dd9b60-5fd0-4a83-aa5e-b77d3808f31a/download>

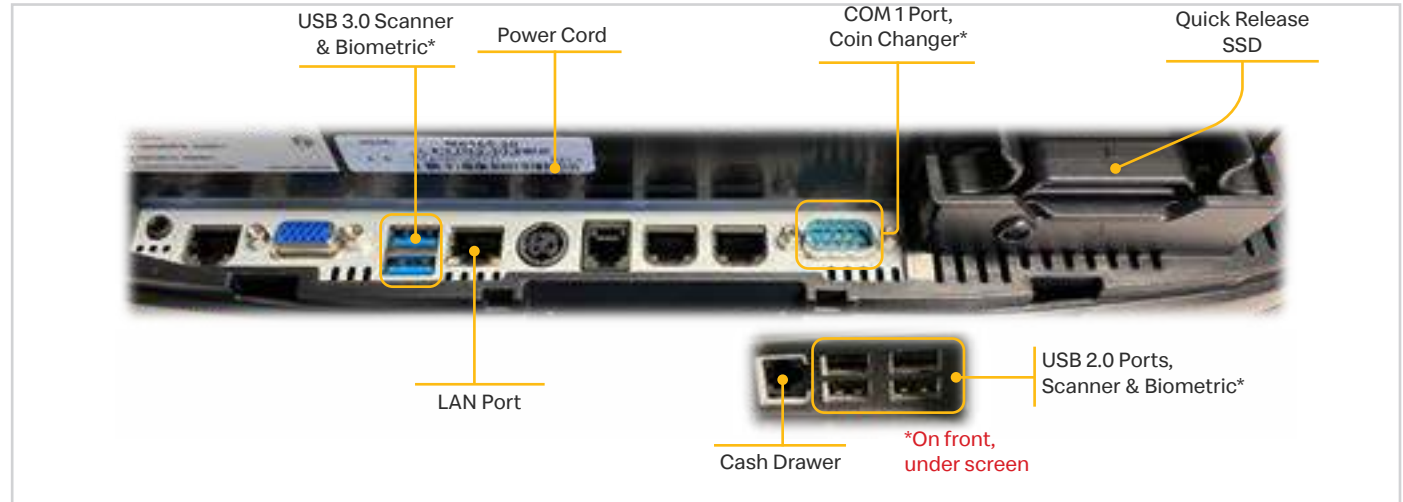
Note: These items can also connect with a PAR RJ45 to DB9 cable (PN#C-4823-01 RJ45).

- The printer, mobile offer scanner, and biometric reader connect to the register's USB ports.
- Mounting brackets are available for the biometric reader.
- The power brick is external to this register.

Note: This device is compatible with Windows 10 Operating Systems.



Par EverServ ES650



*Optional

Register Details:

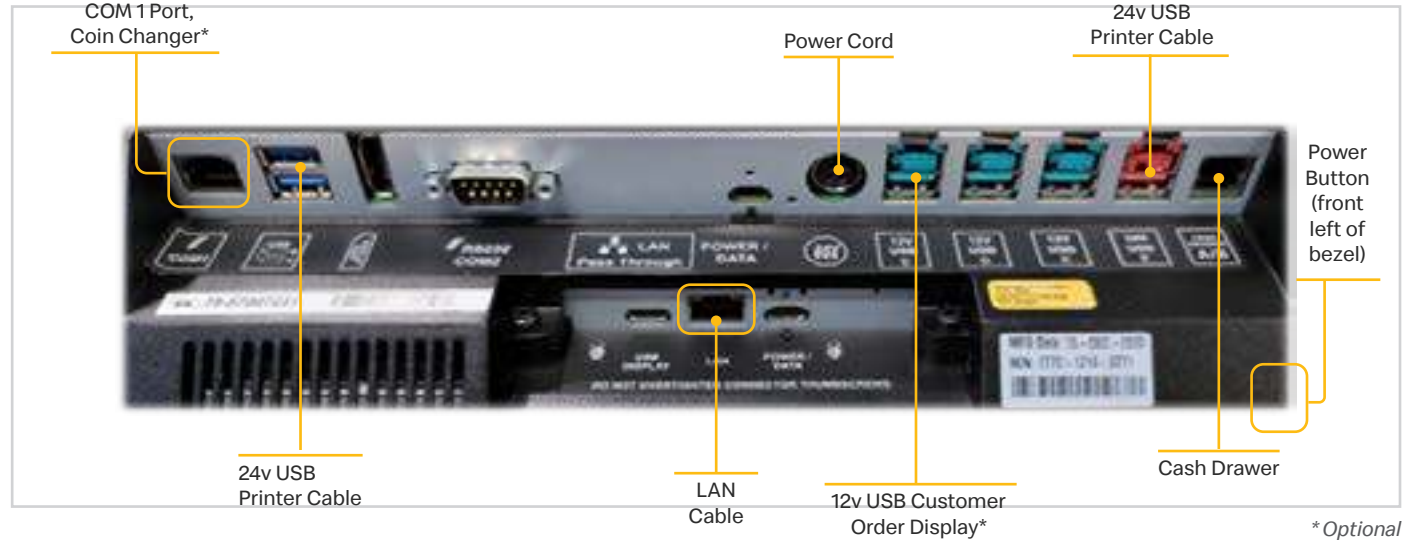
- The Customer Display requires an extension cable.
- This register connects to these cash drawer models:
 - APG Cash Drawer: Models 101A and 102A, both of which require an RJ14 to RJ14 connection.
 - PAR Cash Drawer: This equipment connects with an RJ11 to RJ45 connection.
- Coin Changer: The register and coin changer connect with a directional RJ45 cable. The end labeled POS connects to COM1 on the register while the end labeled COIN DISP goes to the coin changer. For more information, please click this link: <https://otp.mcd.com/documents/79dd9b60-5fd0-4a83-aa5e-b77d3808f31a/download>

Note: These items can also connect with a PAR RJ45 to DB9 cable (PN#C-4823-01 RJ45).

- The printer, mobile offer scanner, and biometric reader connect to the register's USB ports.
- Mounting brackets are available for the biometric reader.
- The power brick is external to this register.



NCR CX7



Register Details:

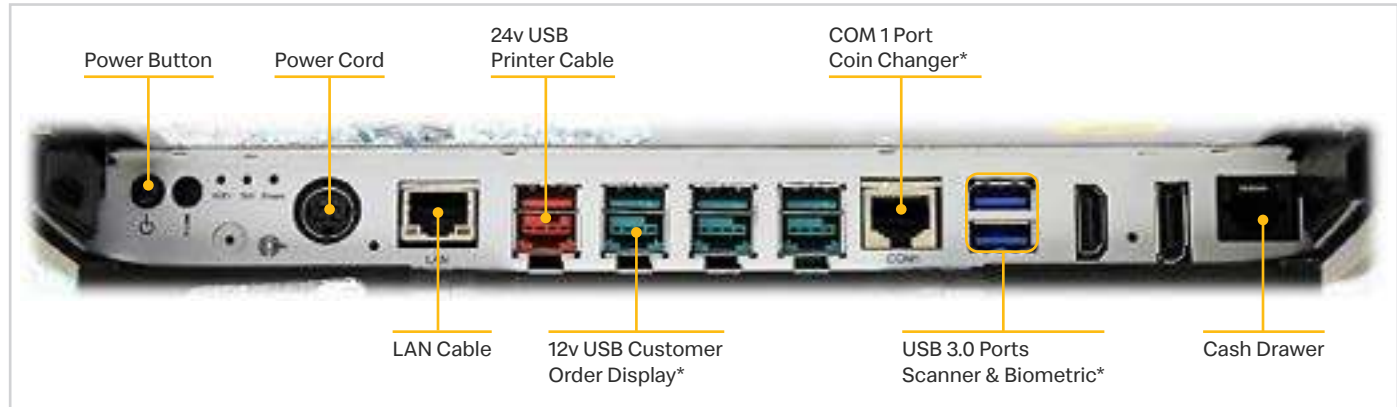
- The Customer Display requires an extension cable.
- Cash Drawer: This register and cash drawer connects to the APG Cash Drawer (Model102A).
- Coin Changer: Using an RJ45 to DB9 cable, connect the RJ45 end to the coin changer and the DB9 end to the DB9 to RJ50 cable, which connects to the COM1 port on the register. For more information, please click this link: <https://otp.mcd.com/documents/79dd9b60-5fd0-4a83-aa5e-b77d3808f31a/download>

Note: The RJ50 to DB9 converter cable is proprietary (PN#1432-C337-0007).

- The printer, mobile offer scanner, and biometric reader connect to the register's USB ports.
- Mounting brackets are available for the biometric reader.
- The power brick is external to this register.



NCR-XR7



*Optional

Register Details:

- The Customer Display requires an extension cable.
- Cash Drawer: This register and cash drawer connects to the APG Cash Drawer (Model102A).
- Coin Changer: Using an RJ45 to DB9 cable, connect the RJ45 end to the coin changer and the DB9 end to the DB9 to RJ50 cable, which connects to the COM1 port on the register. For more information, please click this link: <https://otp.mcd.com/documents/79dd9b60-5fd0-4a83-aa5e-b77d3808f31a/download>

Note: The RJ50 to DB9 converter cable is proprietary (PN#1432-C337-0007).

- The printer, mobile offer scanner, and biometric reader connect to the register's USB ports.
- Mounting brackets are available for the biometric reader.
- The power brick is housed in the base of this register.

Note: This device is compatible with Windows 10 Operating Systems.



Kiosks

Kiosks are touch screen displays customers can use to place an order.

Note: Kiosks may have a touch screen on one side or on both sides.

Before you get started, here are a few tips to help you manage the kiosks:

- Did you know that there is a way that you can receive notifications from the front counter expo when a kiosk runs out of paper? Contact your organization's OTP Pro, who can give you more information and also enable this feature. You can also reach out to the help desk for assistance.
- If a kiosk is unable to take a customer's order, try checking these common issues: a cashier is not logged in to the kiosk, the printer is out of paper, or the kiosk is not open for the day.

Kiosk Model Identification

Tap a Kiosk model to learn more about the Kiosks in your restaurant.



Zivelo



Diebold

OTP1 Refresh

Diebold Kiosks: If the **Help** light does not turn on when the "Help" button is pressed, reboot the controller. If the light still does not turn on, see your OTP Pro.

The most common troubleshooting issues are related to the receipt printer. If receipts are not easy to read when printed, you may need to change or load paper in the receipt printer:

- If you have a Diebold Kiosk, use a magnet to open the printer door to change the receipt paper.
- If you have a Zivelo Kiosk, use the latch and button at the bottom of the Kiosk to open the printer access door and change the receipt paper.



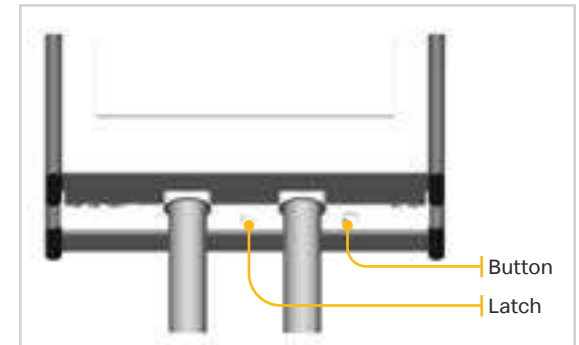
Zivelo Kiosk

Kiosk Details:

- Barcode Scanner is directly below Card Reader
- Help Button on top center below screen
- Receipt printer on left

Opening the Kiosk:

- 1 Under the bottom of the Kiosk door, push the round button in and slide the latch over. This opens the door to the printer.

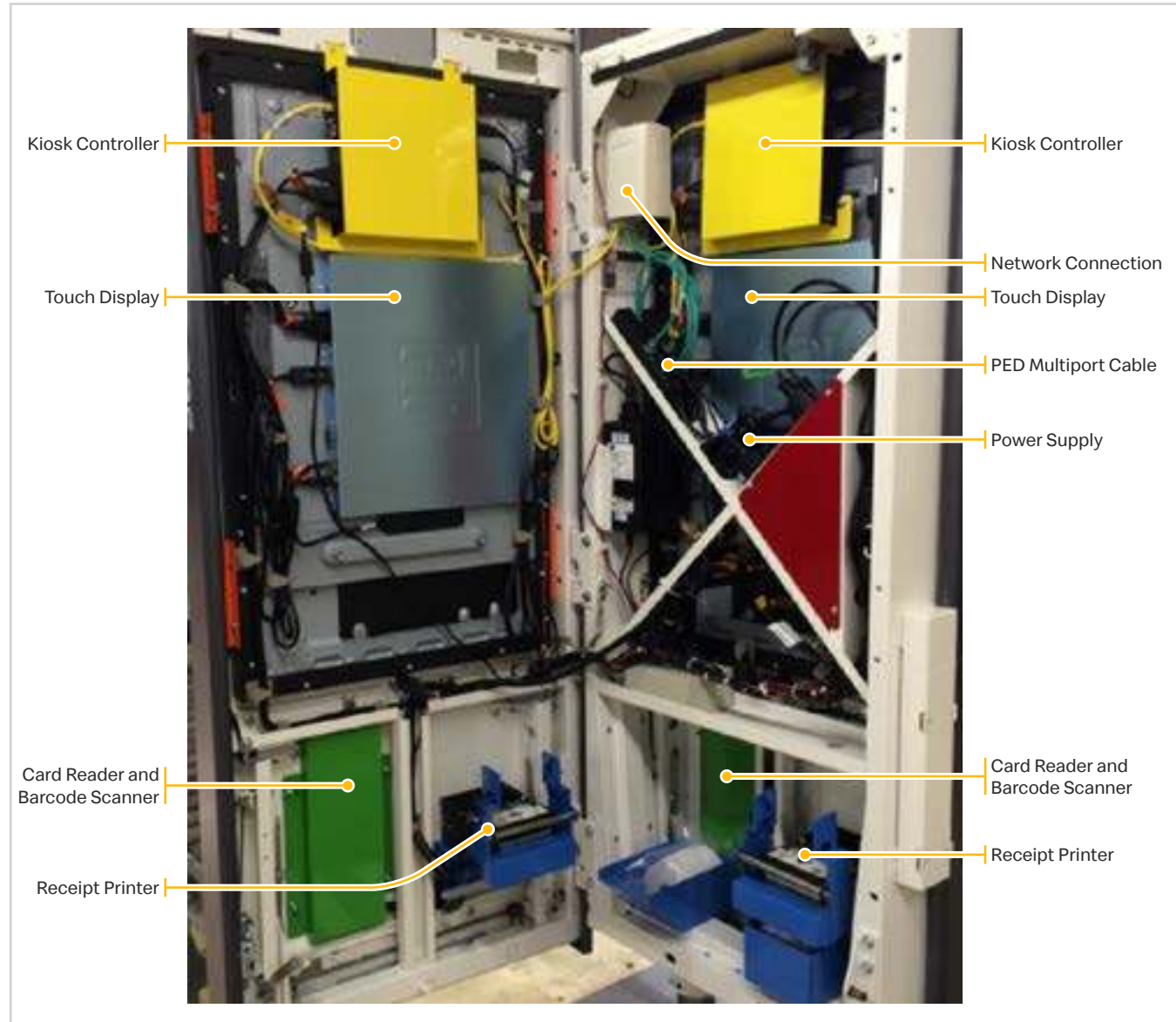


- 2 Use the cam lock key to open the door.





Zivelo Kiosk Internal Components



Internal Component Details:

- The PED connects to the PED Multiport Cable via a green patch cable inside the Kiosk.
- The kiosk network jacks use the same color coding as Front Counter network jacks.
- The controller connects to the network using a yellow network cable connected to a yellow network jack inside the Kiosk.
- An OTP2 can replace the mobile scanner, PED, and printer, but not the kiosk controller.

Note: For steps to replace these components, look at the additional resources at the end of this section.



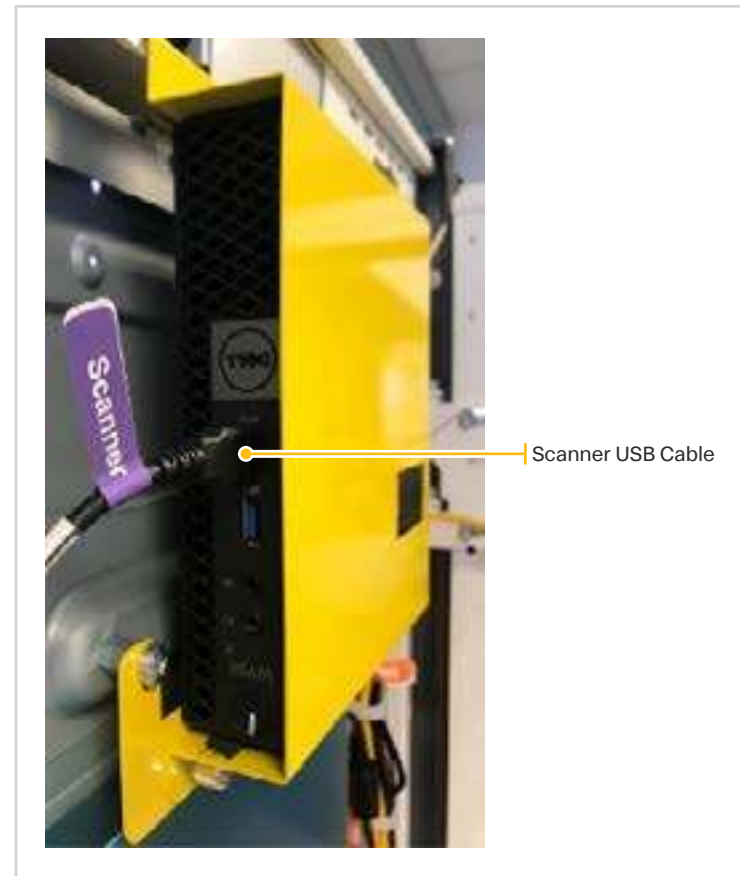
Zivelo Controller Port Identification

The following are the connections to the Lenovo M93p Controller. Connections may differ if a different model of controller was used.

The mobile offer scanner can be plugged into an open USB port on the back or front of the PC.



Controller Back



Controller Front



Powering Down the Zivelo Kiosk

There are two ways to turn off the kiosk. The power button is highlighted in the image below on the left. To safely power off the Kiosk press this button, **do not hold** the button to power off the PC. The button highlighted in the image below on the right will cut power to the entire Kiosk – this method should **never** be done unless instructed to do so by the Help Desk or your OTP Pro.

Always power down using button shown below



Power Button

NEVER power down using button shown below



Power Button



Additional Resources for Zivelo Kiosks

Receipt Printer Replacement:

<https://otp.mcd.com/documents/dc8b5242-2f6a-42ca-9ff2-b688f92b0b5f/download>

PED Replacement:

<https://otp.mcd.com/documents/0802382f-8e10-472b-88b2-316265e91d66/download>

PED Replacement Portal Video:

<https://otp.mcd.com/video/296/view>

Scanner Replacement:

<https://otp.mcd.com/video/297/view>



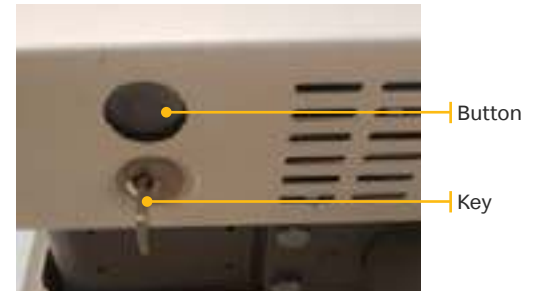
Diebold Kiosk

Kiosk Details:

- Barcode Scanner is on far Left
- Help Button on left below Barcode Scanner
- PED and receipt printer on right

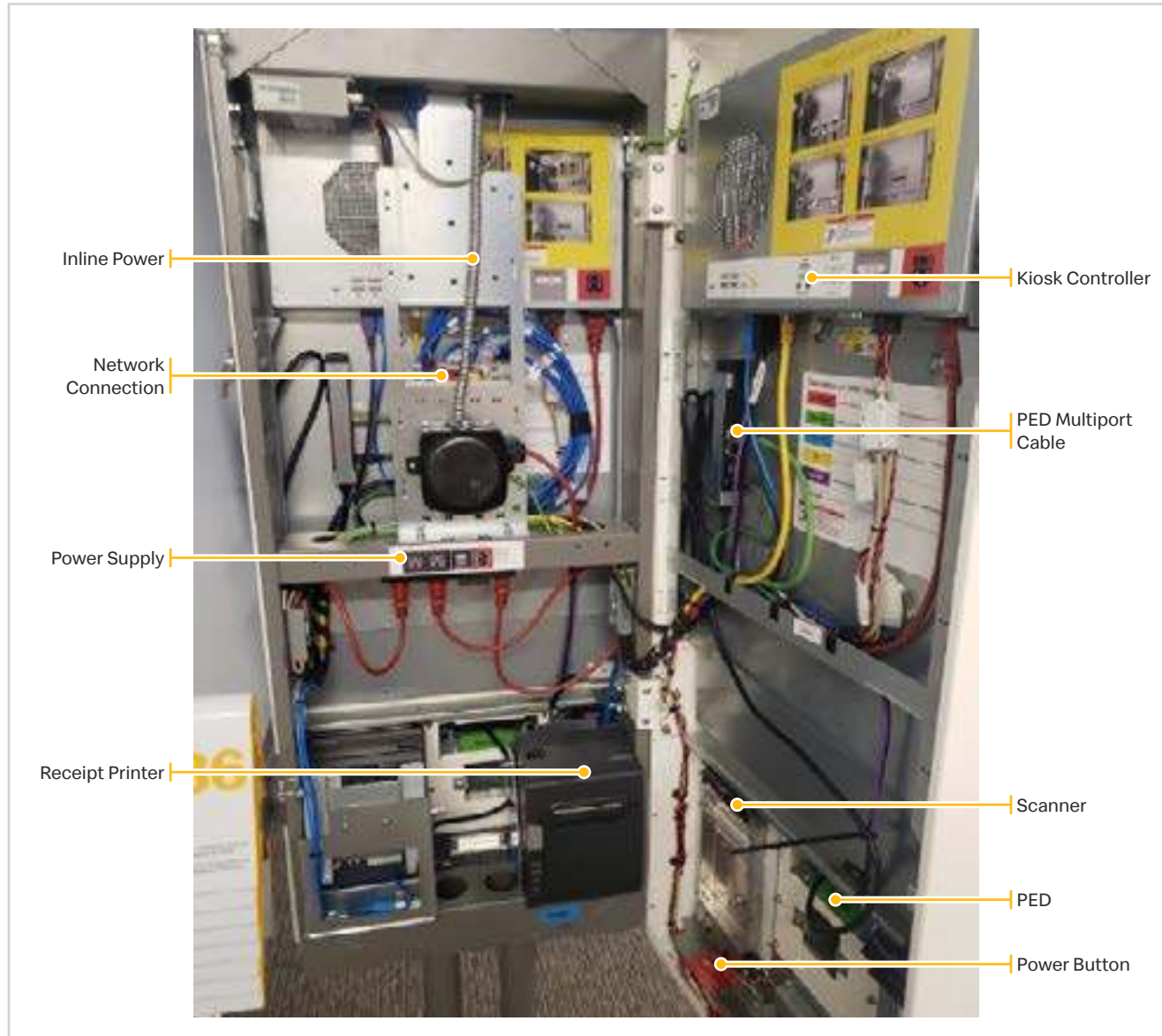
Opening the Kiosk:

- 1 Insert the key into the bottom on the side you want to access.
- 2 Turn the key counterclockwise and press the button next to the slot.





Diebold Kiosk Internal Components



Internal Component Details:

- The PED connects to the PED Multiport Cable via a green patch cable inside the Kiosk.
- The kiosk network jacks use the same color coding as Front Counter network jacks.
- The controller connects to the network using a yellow network cable connected to a yellow network jack inside the Kiosk.
- An OTP2 can replace the mobile scanner, PED, and printer, but not the kiosk controller.

Note: For steps to replace these components, look at the additional resources at the end of this section.



Diebold Controller Port Identification



Receipt Printer

Barcode Scanner

Pole Light

LAN Port

18-PIN Power Cord

Power Switch

A/C Power Cord



Powering Down the Diebold Kiosk

- 1** Open the kiosk door using the magnet (available with the restaurant). Place the magnet centered above the paper exit slot to open the printer door. (If the restaurant cannot provide a magnet or open the printer door, go to step 5.)



- 2** Shut Down the kiosk using the silver Power button inside the printer door.



- 3** Unlock the kiosk using the key. Insert a fingertip in the opening indicated by the arrow in the picture below and press up to release the door latch.



- 4** Use the stay bar to hold the door open.



- 5** If you were unable to get the magnet in step 1, shut Windows down using the silver power button just inside the printer door as shown in the picture below.





Additional Resources for Diebold Kiosks

Printer Replacement:

<https://otp.mcd.com/documents/c9b45804-8327-41e1-b355-26ca2a88f0a6/download>

Printer Replacement Portal Video:

<https://otp.mcd.com/video/454/view>

Power Down Procedures:

<https://otp.mcd.com/documents/e1d2fabf-a6d7-4679-904f-df4e8be1aa35/download>

Scanner Replacement:

<https://otp.mcd.com/documents/a965786a-ee9a-4bb2-acd0-91490481d6b4/download>

Scanner Replacement Portal Video:

<https://otp.mcd.com/video/456/view>

Diebold Kiosk Troubleshooting:

<https://otp.mcd.com/documents/a2e885f0-2057-479e-a1ec-b1b3c84de1fa/download>

PED Replacement:

<https://otp.mcd.com/documents/7122ced0-d5cf-4412-bcd8-2f9031b90b90/download>

PED Replacement Portal Video:

<https://otp.mcd.com/video/455/view>

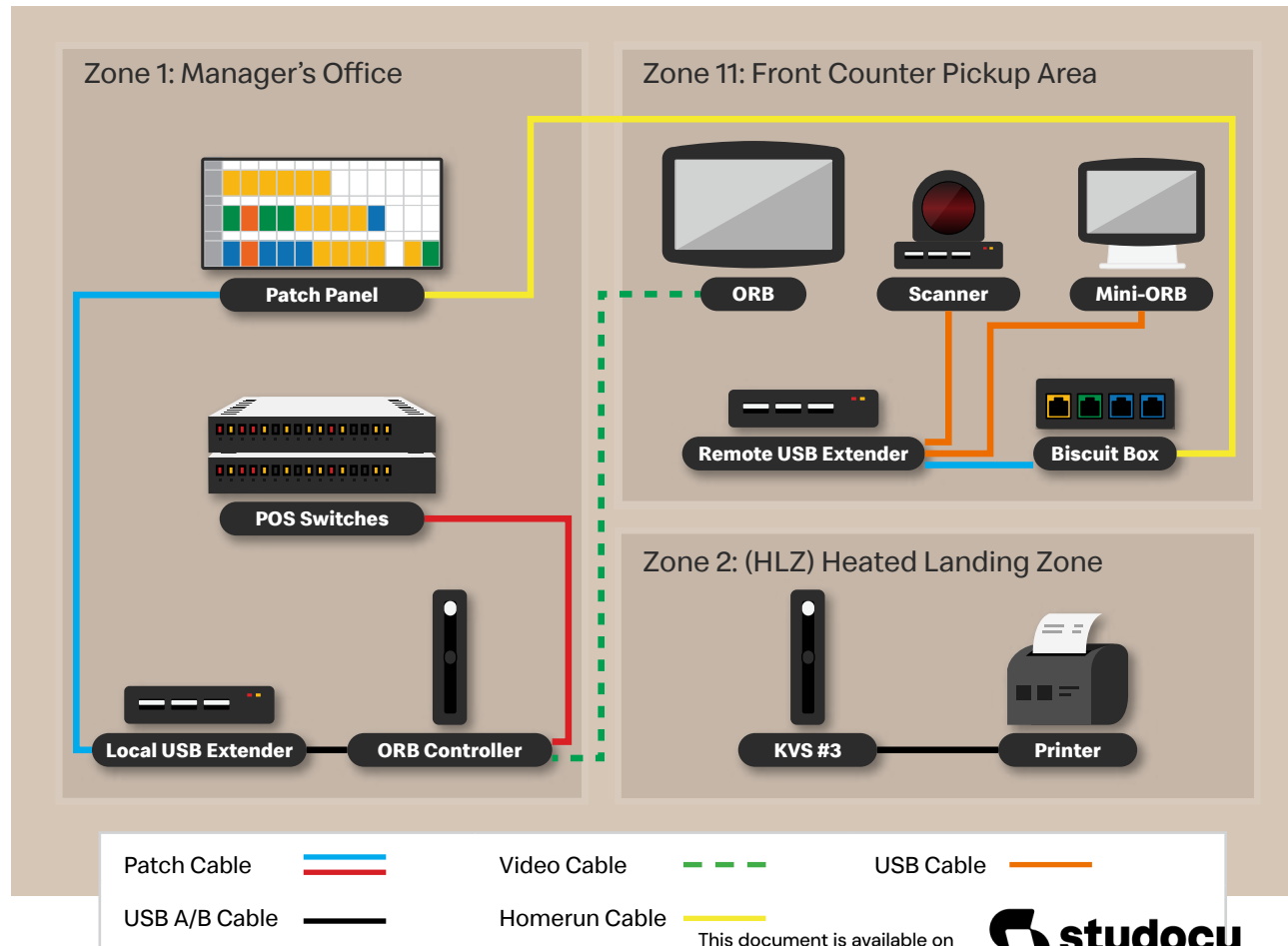


Dual Point 2.0

As you have learned in the OTP1 and OTP2 modules, Dual Point 2.0 is a system that improves order accuracy and customer flow at the Front Counter Pickup Area, which handles in-restaurant orders, mobile orders, and restaurant-delivery services. This section will review the equipment and connections that make up this system.

Overview of Restaurant Device Connectivity

This graphic shows a bird's-eye view of the components that create the Dual Point 2.0 solution in the restaurant.



OTP1 Refresh

Dual Point Customer Order Process:

In OTP1, you learned how the devices worked together to create and serve an order. Here's a recap of that process:

1. When a customer order is paid out, an order number and status of the order displays on the Order Ready Board (ORB).
2. Behind the scenes, the ORB Controller enables much of the Dual Point equipment to communicate, through the USB Extenders.
3. When an order is ready to be served to the customer, the Barcode Receipt Printer prints a receipt.
4. A crew member scans the receipt using the Dual Point Barcode Scanner.
5. The Mini-ORB serves as a backup to the Dual Point Barcode Scanner.



Common Issues & Fixes:

Here are some common problems and what to look for:

- If there is a problem with the Dual Point Scanner, Mini-ORB, or ORB Controller, it could be an issue with one of the USB Extenders.
- Please Note: If the problem is with the Dual Point Scanner or Mini-ORB, you may need to recalibrate the Mini-ORB and reprogram the Dual Point Scanner.
- If the Barcode Scanner Printer's receipts are illegible or the barcodes are not scanning, the printer head likely needs cleaning. Also, make sure the paper stock is not substandard. Paper stock should come from the distribution center.
- If the Barcode Scanner Printer is not printing receipts, the print head may need cleaning, or if you cannot perform a print test, you may have to swap out or replace the printer.
- If you have an issue with the ORB and Mini-ORB, reboot the ORB Controller. If the problem is with the Mini-ORB only, remove the cover and inspect the cable connection.
- If the Dual Point Barcode Scanner is not removing orders from the ORB, check its connection to the Remote USB Extender. Also check for debris or dirt on the scanner lens.

Rebooting Equipment

There are two ways you can reboot equipment:

- **Powercycling:** When power cycling a device, only press the Power button down for one second.

Additional Helpful Resources

- **Dual Point Troubleshooting Guide**

<https://otp.mcd.com/documents/3c174b54-6d6d-42ea-a7d1-2268b79ff4c4/download>

- Knowledge Articles: Go to the Portal > Select ATOS Service Now > Select Knowledge > Search articles

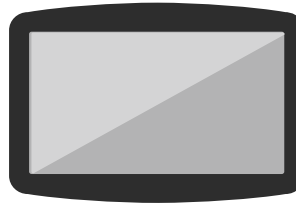


Equipment

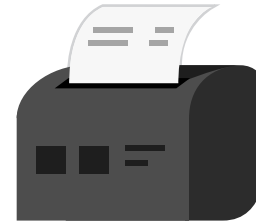
Let's take a look at the key components of the Dual Point 2.0 solution. Tap an image to go to its section to learn more about it.



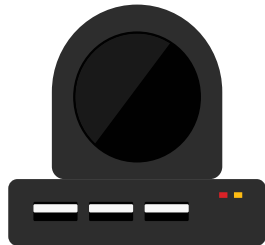
ORB Controller



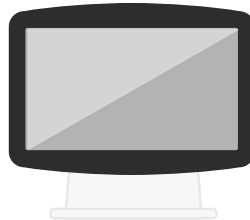
ORB



Dual Point Printer



Dual Point Scanner



Mini-ORB



USB Extenders



ORB Controller

The ORB Controller sends information to all other Dual Point components making it possible for them to work properly.

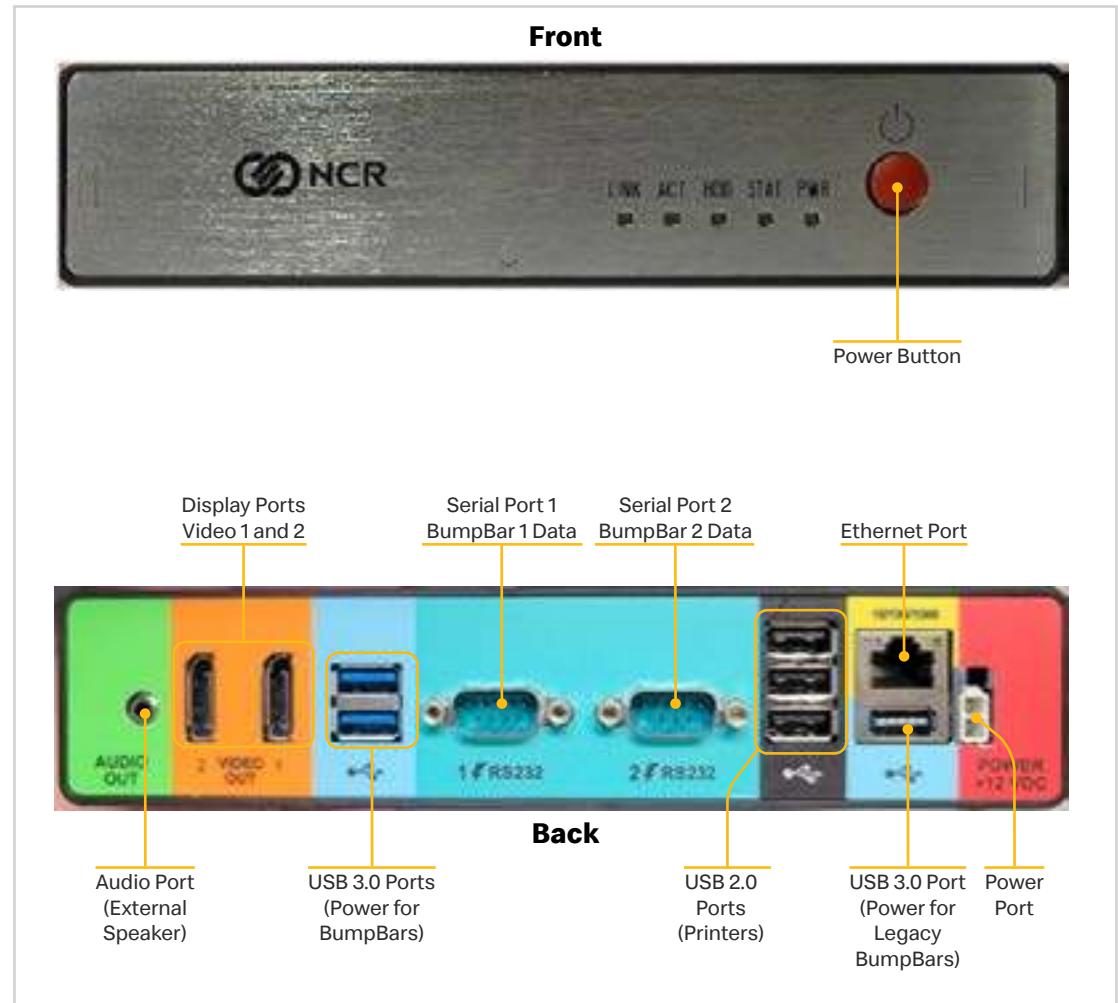
Connections:

The ORB Controller is in Zone 1, the Manager's Office, and has a power cable and power brick connected to a power outlet.

A Video Cable connects from the ORB in Zone 3, using a display port adapter or DVI video adapter, depending on the model.

The ORB Controller also uses a network cable to connect to a biscuit box or directly to the network switch to communicate with registers and the POS system. It also connects to the Local USB Extender via a USB A to B Cable.

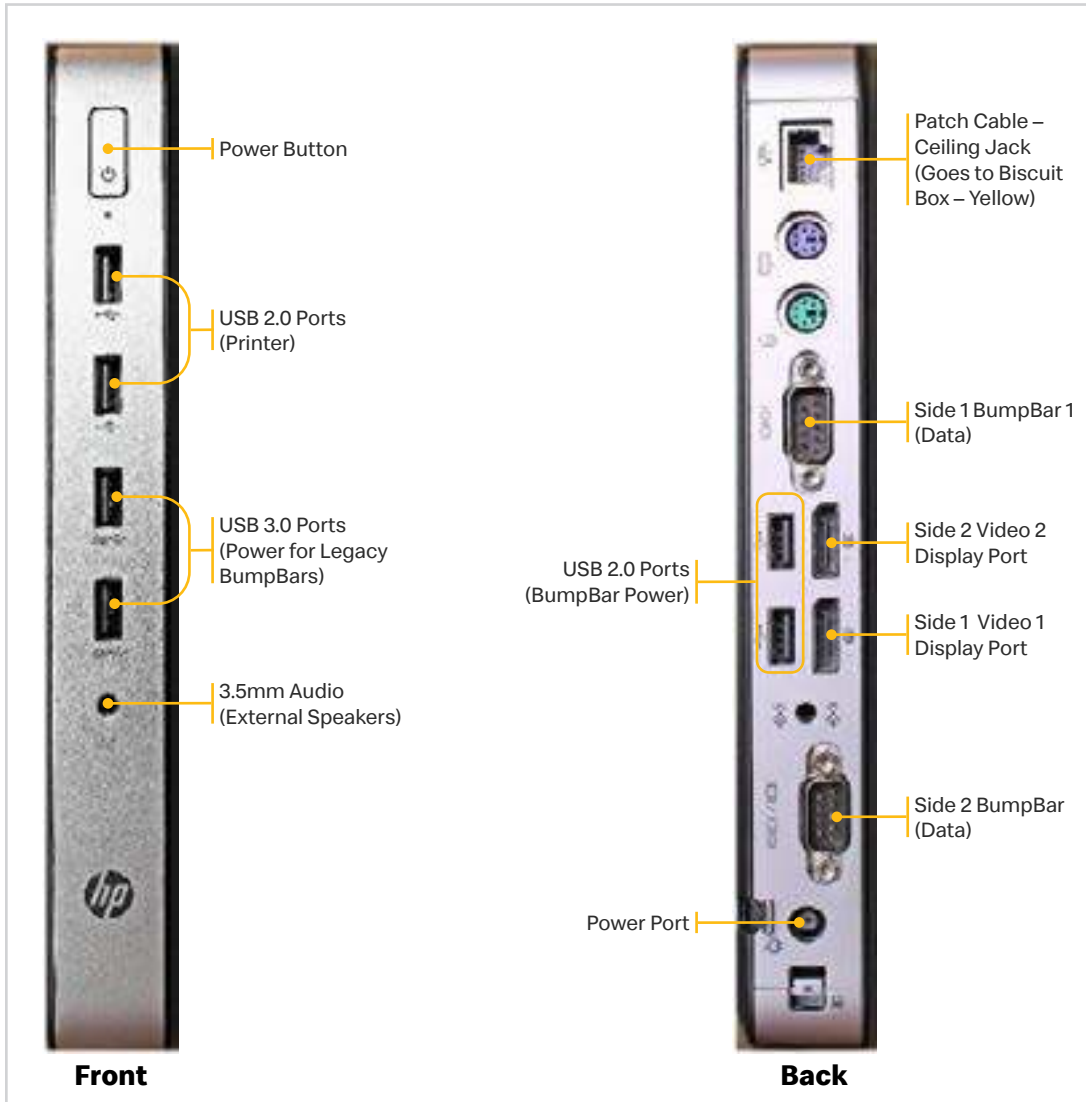
NCR Controller



Dell/WYSE and HP 7521 on next page.



HP T630 Controller





ORB

This monitor, typically hung from the ceiling or attached to a customer-facing wall at the Front Counter, shows customers when their order is in progress and when it is ready for pick up at the Front Counter.

Connections:

It uses a power cable that connects to an isolated ground outlet. It also connects to the ORB Controller in the Manager's Office via a 100-foot Video Cable.





Dual Point Printer

The printer can be found on a small order-assembly table to the right of the Heated Landing Zone (HLZ) in Zone 2.

Connections:

It connects to KVS Controller 3.

The printer uses a power cable and a printer cable.





Dual Point Scanner

This is the main way to serve orders from the ORB via a barcode slip when the order is presented.

Connections:

It connects to the Remote USB Extender in Zone 3 with a USB Cable. That allows it to communicate with the ORB Controller in Zone 1.

Recalibrating the Scanner

If a barcode is not printing properly or you hear three beeps when you power it up, you may need to recalibrate the **Dual Point Scanner**. To do this, scan each individual barcode in the sequential order shown here.

The Dual Point Scanner stores its own configuration, does not update any software elsewhere, and keeps its configuration through power cycles.

Once you scan this set of barcodes, **test the Scanner** by scanning a barcode created from an order.

Note: When scanning a barcode, cover the other barcodes with your hand and/or a piece of paper to prevent scanning the wrong one in the sequence.



1 Enter/Exit Configuration Mode



2 Recall Defaults



3 Min Length



4 Enter/Exit Configuration Mode



Note: Configuration is complete when you finish step 4.

If your scanner needs to be reconfigured, refer to:

ORB Scanner Serial Mode Config: <https://otp.mcd.com/documents/980d7e7c-2a2d-4b19-a1ce-94f4660ee5c7/download>



Dual Point Mini-ORB

This is a smaller touch screen monitor that faces the crew and is used to serve the orders from Dual Point in Zone 11 if the Dual Point Scanner is not working properly, or the printer barcode receipts are faded or unavailable due to a printer malfunction.

Connections:

It uses a USB Cable to connect to the Remote USB Extender in Zone 11. This USB has two connections, one for power and one for data.

Calibrating the Mini-ORB

Follow the steps below to calibrate a Mini-ORB using Cellphie.

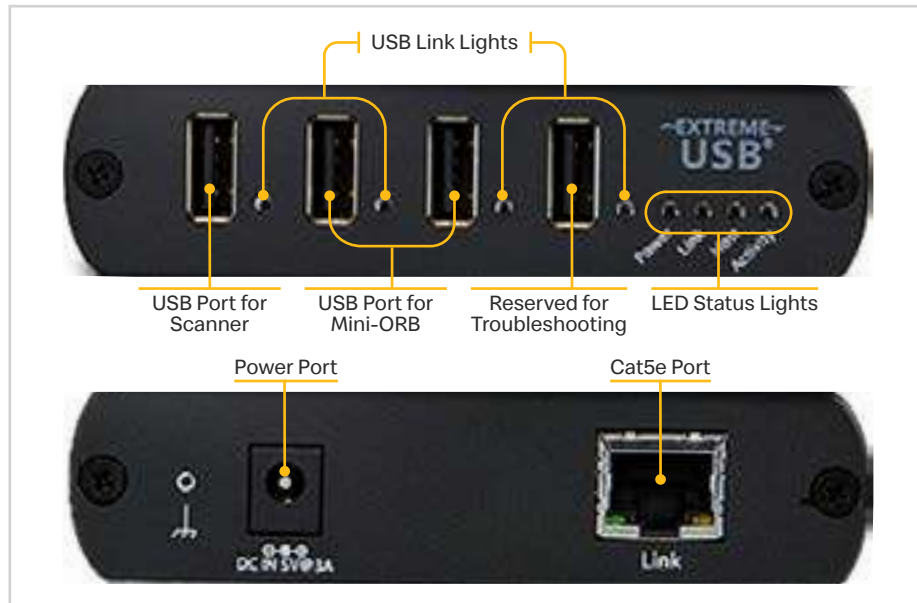
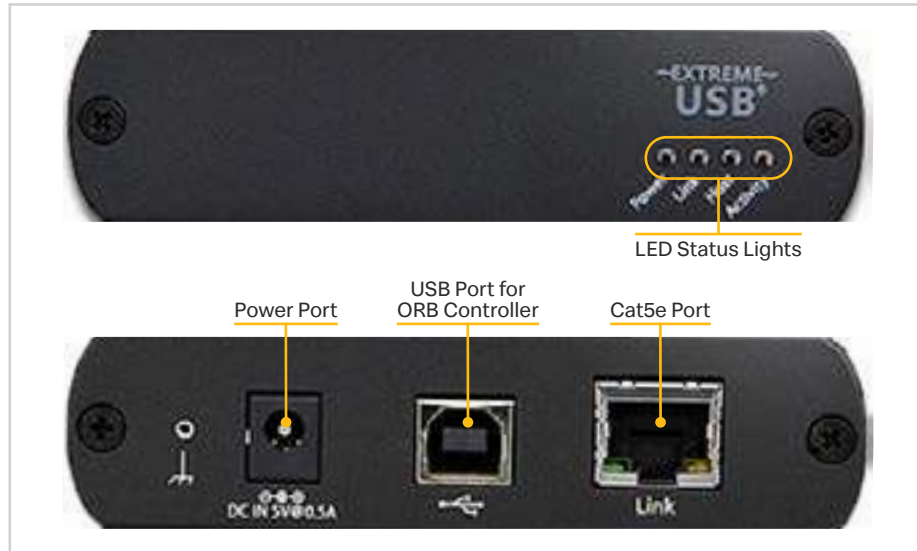
Log onto the BOS and click the **Cellphie icon**.

- 1** ***Note:** It may take up to two minutes after you click the icon for Cellphie to open.*
Click **Utilities**.
- 2** Click **Touch Screen Calibration**.
(Follow the screen options to check if the Mini-ORB is online.)
- 3** Select the appropriate Mini-ORB and click **Initiate Calibration**.
- 4** Click **OK**.
- 5** The calibration screen will show on the ORB display (customer display) first. Wait for the calibration screen to move to the Mini-ORB (after 10-30 seconds).
- 6** Tap the **CENTER** of the target shown, then lift your finger.
- 7** Tap **Accept**.
- 8** Close the Cellphie Window on the BOS by clicking the **X** in the top right corner.
- 9** ***Note:** The Cellphie icon will remain in the taskbar after you close the Cellphie Window.*





USB Extenders



Local USB Extenders

The Local USB Extender is found in the Manager's Office near the ORB Controller.

Connections:

This device connects to the ORB Controller with a USB A to B Cable, which provides its power.

It connects to the Remote USB Extender in Zone 11 via a HomeRun cable from the back of the patch panel in the Manager's Office to the biscuit box in Zone 3. The color of the patch cable from the extenders to the biscuit box and patch panel may vary depending on the cable standards in your restaurant.

Remote USB Extenders

This device gets its power from an AC Adapter in Zone 3.

Connections:

The scanner and Mini-ORB connect to this via USB cables.

It will also connect to a biscuit box under the counter closest to the drive thru present window using a patch cable. It will have a corresponding connection at the patch panel in Zone 1 from the Local USB Extender.

Note: Colors may vary based on Cabling Standard documents.



Status Indicator Lights on USB Extenders

Status Indicator lights on USB extenders are a good way to check if everything is working properly. In fact, if you are having problems with the Dual Point Scanner, Mini ORB or ORB Controller, it may be due to a problem with one of the USB Extenders.

LED Indicator Light – Solid/On: This light indicates the USB connection and data activity are working properly between the two extenders.

Power – Solid: Power is being supplied

Off: No power supplied

Link – Solid: Link is established between Local and Remote USB Extenders. This indicates the physical connection.

Off: There is no link and no physical connection.

Host – Solid: Detected and installed by host computer.

Flashing: Local and Remote USB Extenders are in suspended mode.

Off: No link, no physical connection.

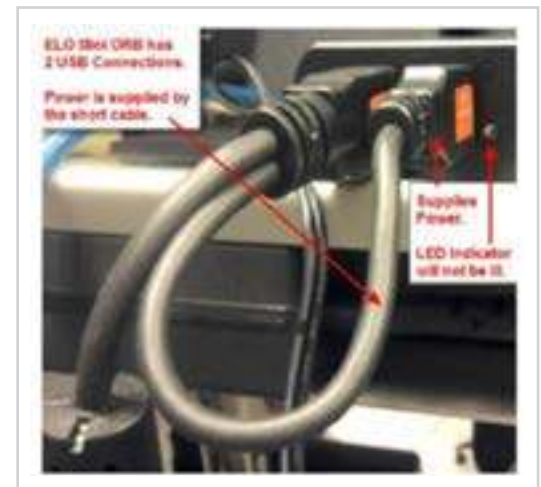
Activity – Flashing: Data transmission between Local and Remote USB Extenders established.

Off: Local and Remote USB Extenders are in suspended mode.

Note: Equipment may vary by restaurant, but your restaurant's extenders should have similar status indicator lights.

ELO Mini-ORB

There is one exception to the indicator lights. If you are using an ELO Mini ORB, the USB extender will provide additional power to that device. So if the indicator light is off, it is only providing power, not data to the Mini ORB.

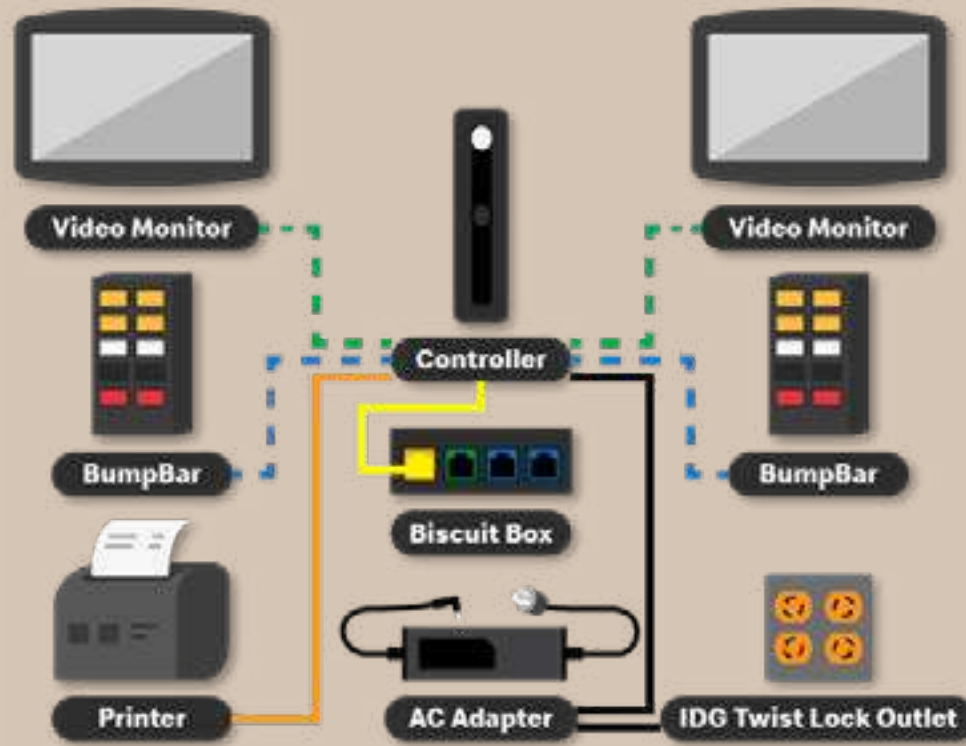




Controllers

Controller and Connections Overview

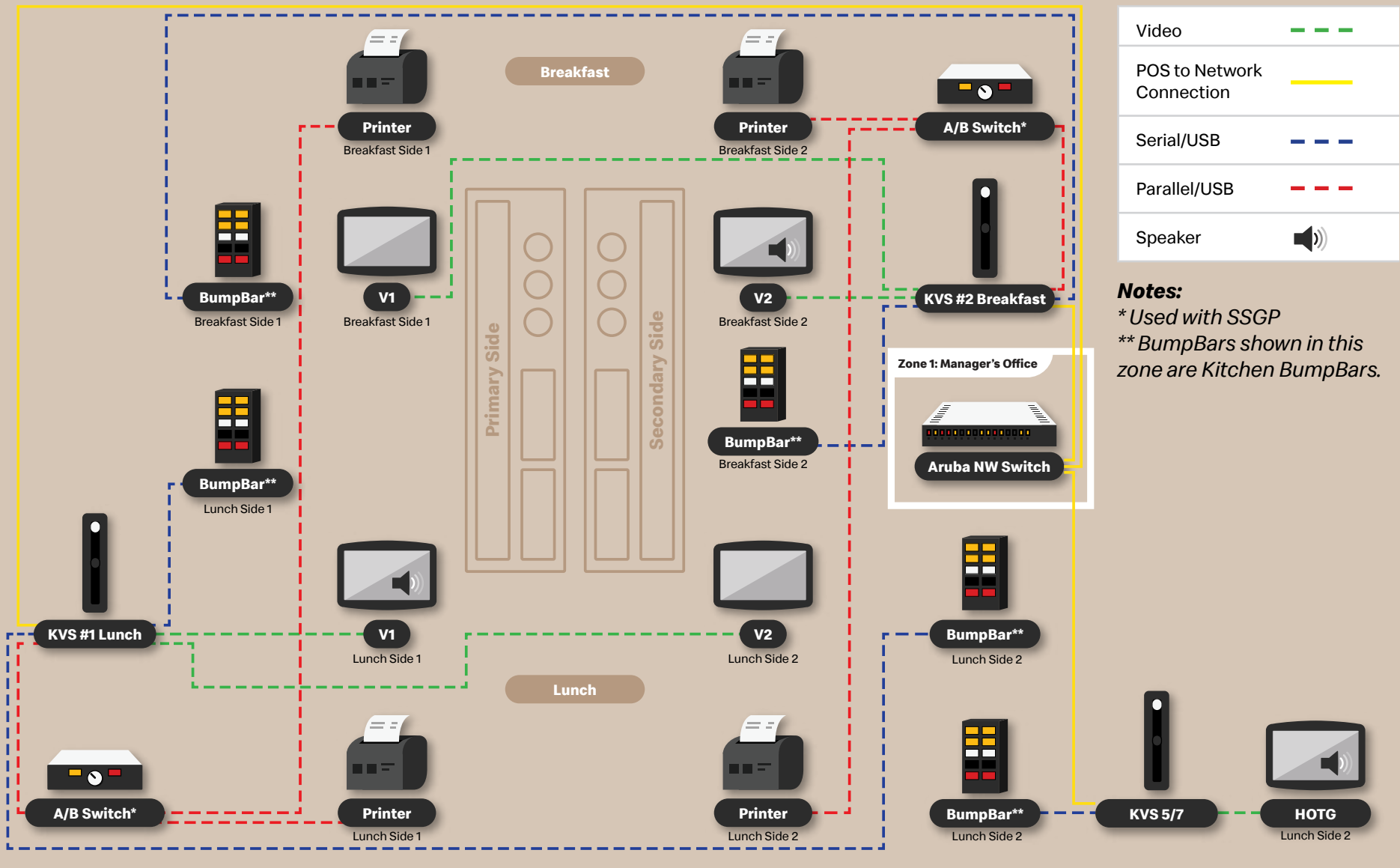
Controllers are small computers that control the peripherals connected to them such as monitors, bumpbars and printers. Once assigned an application when imaged and installed, the controller will know what it needs to display and/or print. This graphic provides general information about controllers and their connections to other devices. Graphics that follow display the specific connections for defined controller types.



Serial/USB Cable	— — —	Video Cable	— — —	USB or Parallel Cable	—
Power Cable	—	Network Cable	—		



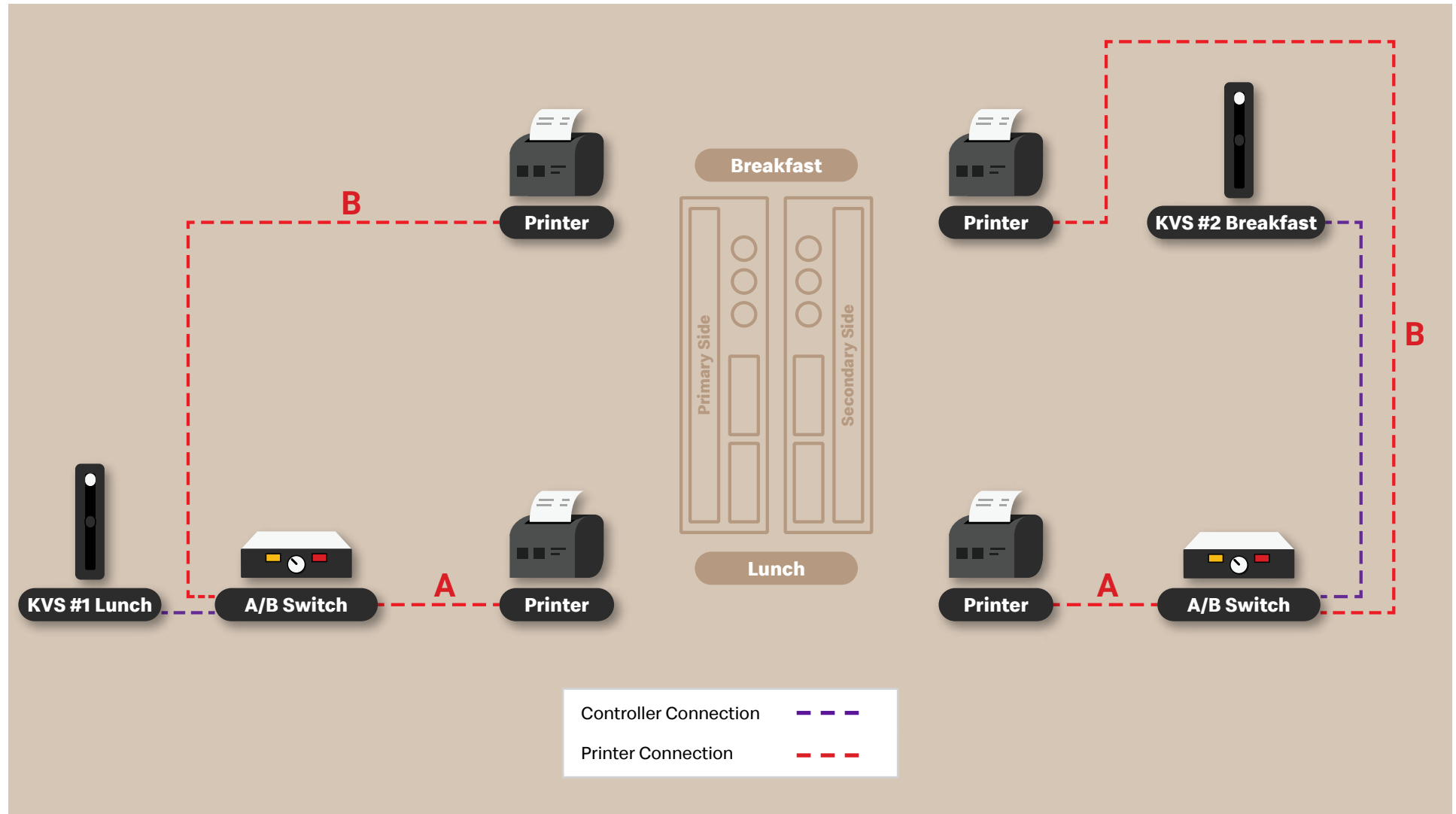
Zone 2: Kitchen





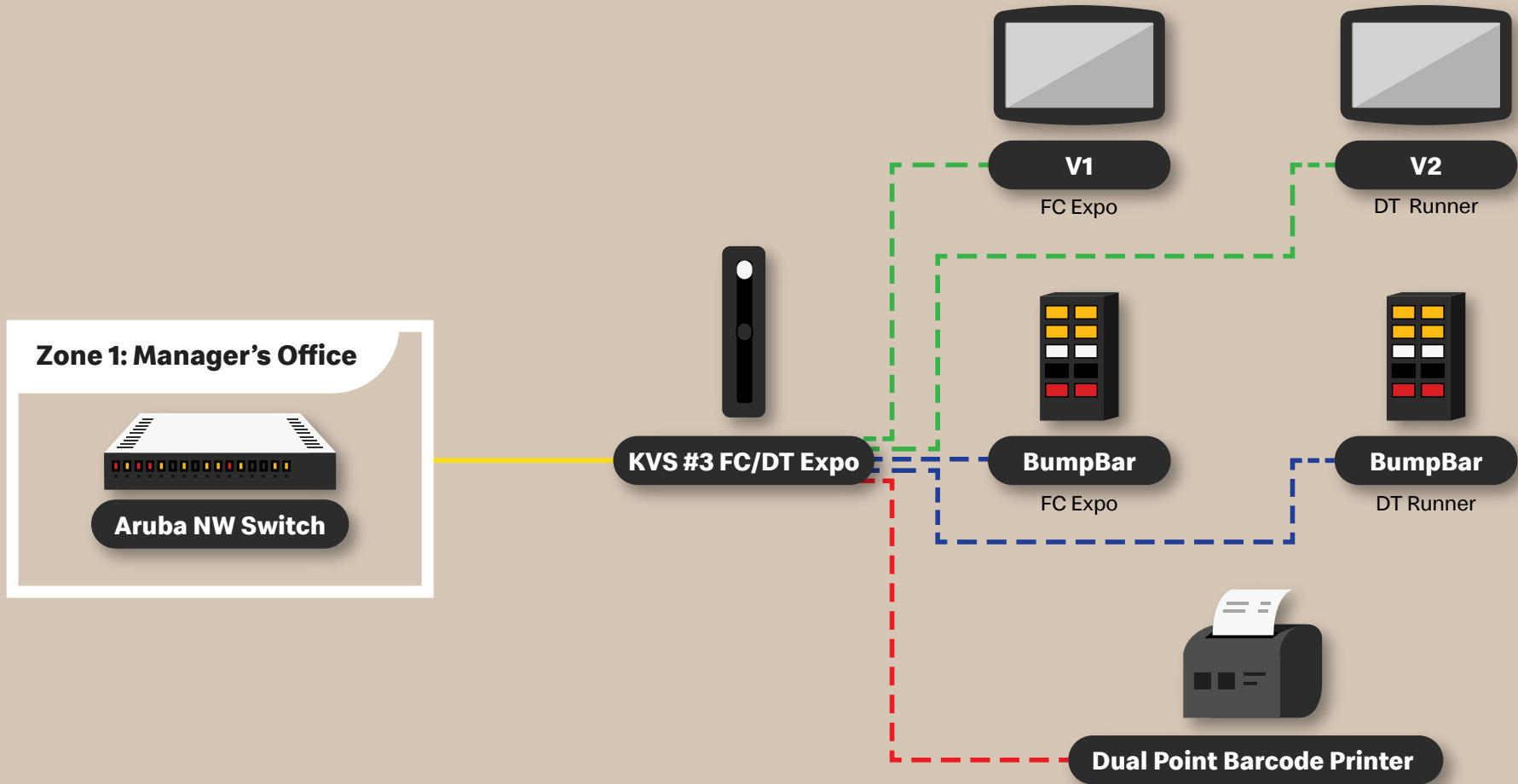
Side Specific Grill Printing (SSGP)

Some restaurants have Side Specific Grill Printing, or SSGP, which allows grill slips to be printed to either the Breakfast or Lunch end of the prep table, depending on day part. The A/B SwitchBox on side 1 is connected to KVS 1 and sends the signal to the printers on side 2. The A/B Switchbox on side 2 is connected to KVS 2 and sends the signal to the printers on side 2.



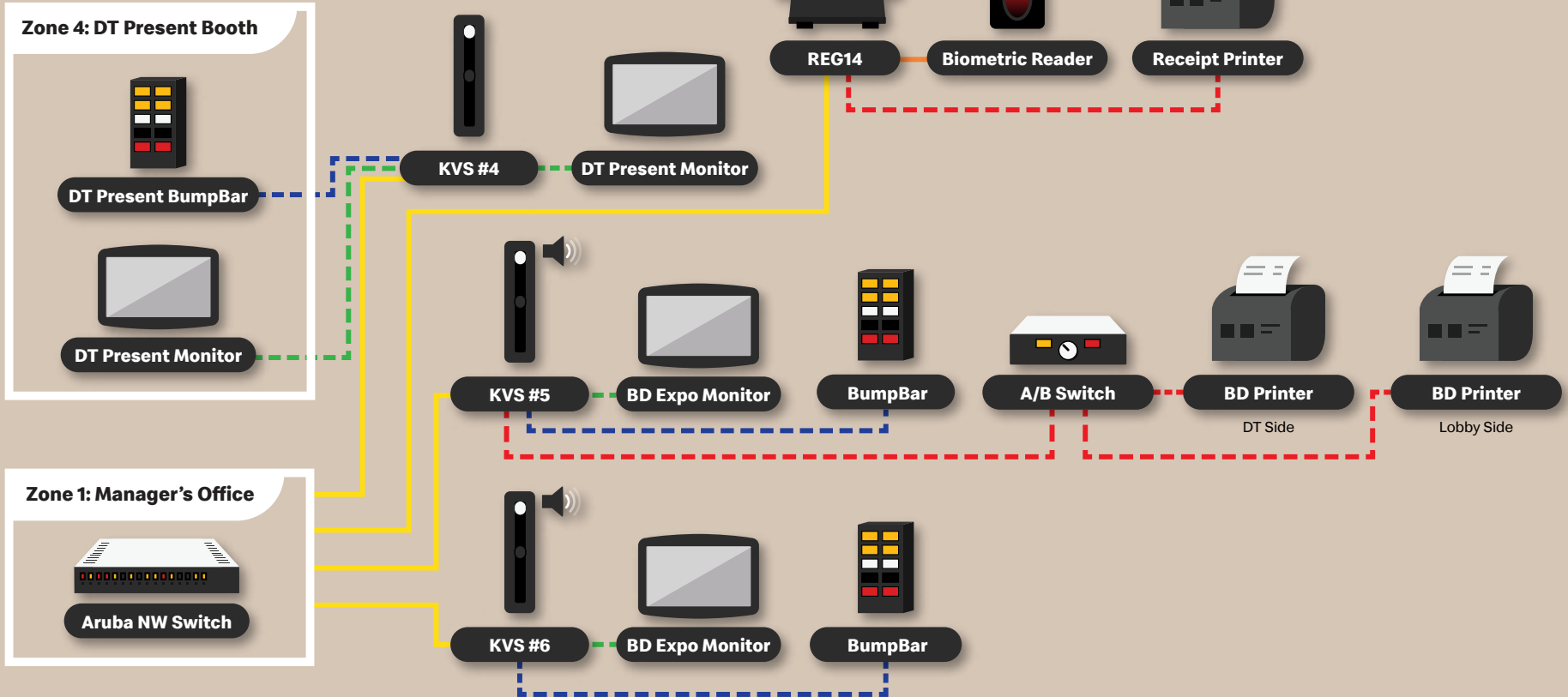


Zone 2: HLZ (Heated Landing Zone)





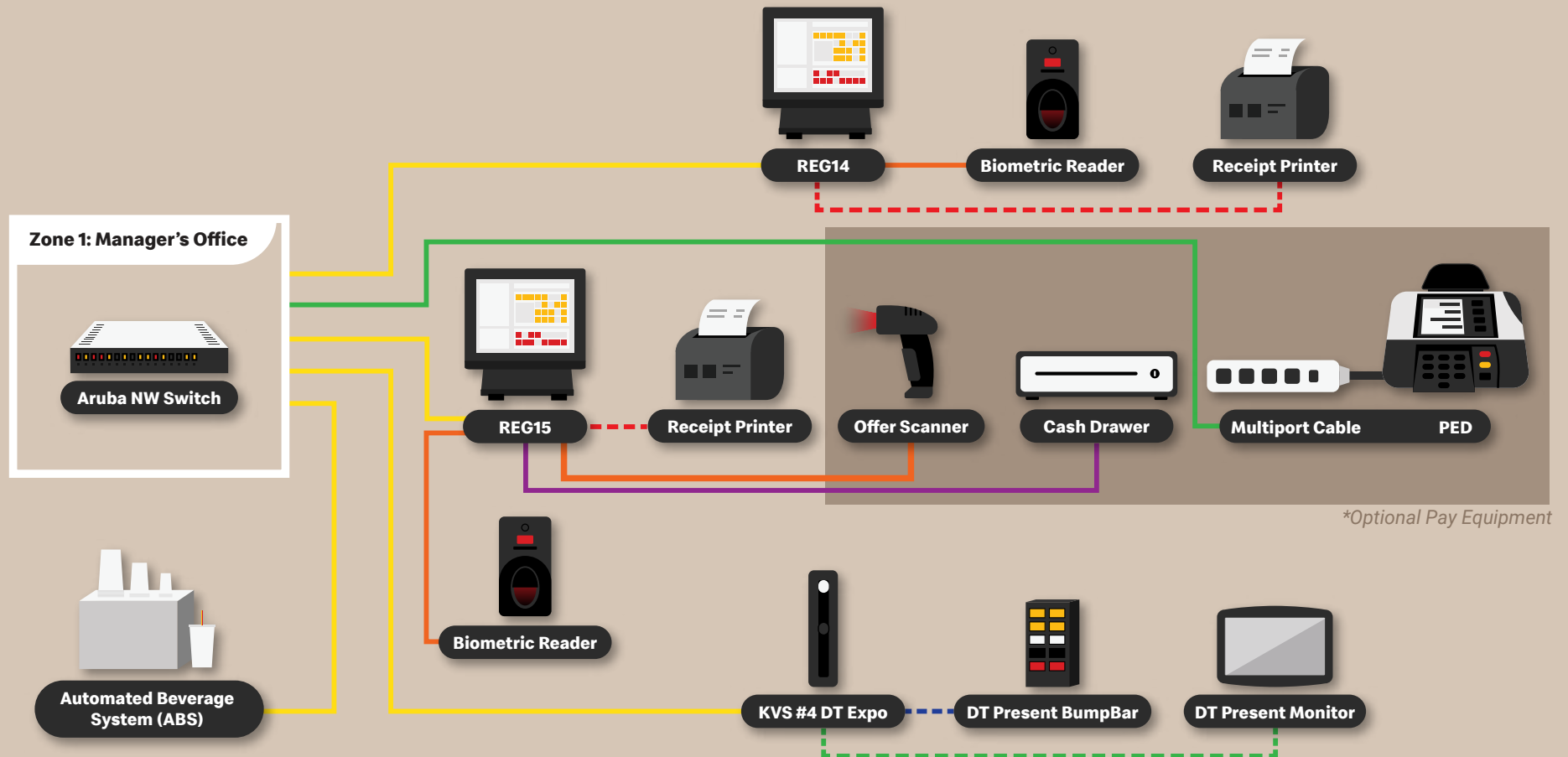
Zone 10: DT Beverage & Dessert



POS to Network Connection	—	USB	—	Parallel/USB	- - -
Video	- - -	Serial/USB	- - -	Speaker	



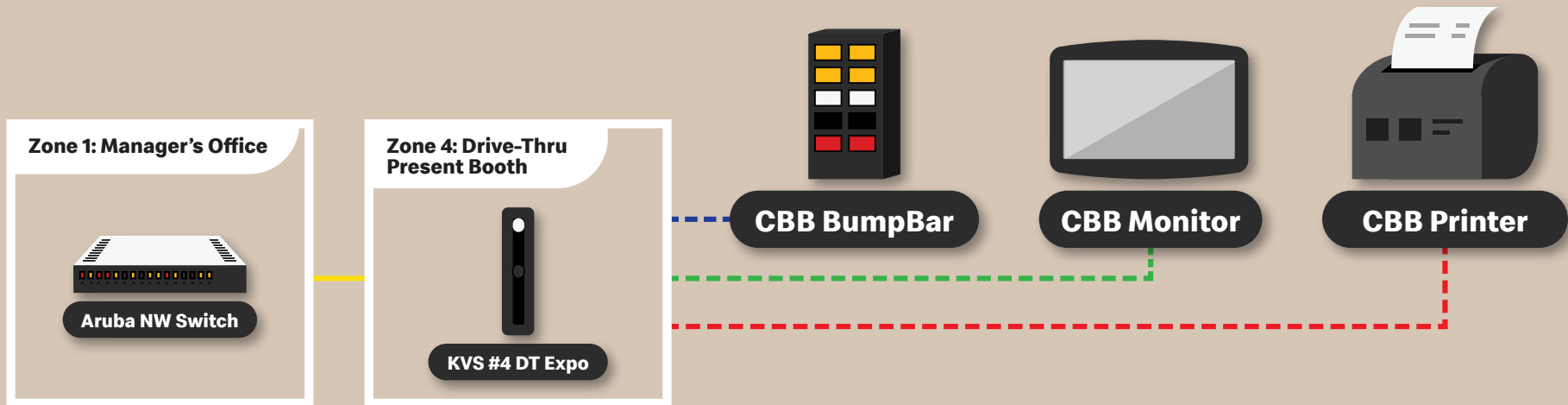
Zone 4: DT Present Booth



POS to Network Connection		USB		Parallel/USB		PED to Network	
Video		Serial/USB		Cash Drawer			



Zone 7: CBB Area



POS to Network Connection		Parallel/USB	
Video		Serial/USB	



OTP1 Refresh

In the OTP1 curriculum, you learned that the controllers in your restaurant can be configured as a Kitchen Video System (KVS), an Order Ready Board (ORB), or as Beverage/Dessert.

Note: Controllers will also be used for e*Production, an upcoming initiative that will assist in recommending production quantities for items in the kitchen.



Standard Restaurant

Controller Type	Controller Number	Video 1	Video 2	Bump Bar (COM) 1	Bump Bar (COM) 2	Printer
KVS	1	Lunch Side 1	Lunch Side 2	Lunch Side 1	Lunch Side 2	Side 1 Grill (A/B Switchbox)
	2	Breakfast Side 1	Breakfast Side 2	Breakfast Side 1	Breakfast Side 2	Side 2 Grill (A/B Switchbox)
	3	FC Expo	DT Runner	FC Expo	DT Runner	Dual Point Barcode
	4	DT Present	CBB	DT Present	CBB	CBB
	5	HOTG	Not Configured	HOTG	Not Configured	Not Configured
ORB	1	Order Ready Board	Not Configured	Not Configured	Not Configured	Not Configured
EPR	1	UHC	Fry/Hashbrown	EPR increase/decrease	Not Used	Not Used
	2	Bake Monitor	Not Used	Bake	Not Used	Thaw/Tempering Printer

Note: These tables represent a typical restaurant configuration. It is possible that your restaurant may differ slightly. See your OTP Pro for more information.

Not configured: Is capable of supporting additional configuration if needed
Not used: Does not support any additional configurations at this time



OTP1 Refresh



BDAP Restaurant

Controller Type	Controller Number	Video 1	Video 2	Bump Bar (COM) 1	Bump Bar (COM) 2	Printer
KVS	1	Lunch Side 1	Lunch Side 2	Lunch Side 1	Lunch Side 2	Side 1 Grill (A/B Switchbox)
	2	Breakfast Side 1	Breakfast Side 2	Breakfast Side 1	Breakfast Side 2	Side 2 Grill (A/B Switchbox)
	3	FC Expo	DT Runner	FC Expo	DT Runner	Dual Point Barcode
	4	DT Present	Not Configured	DT Present	Not Configured	Not Configured
	5	Beverage/ Dessert (DT Side)	DT Runner	Beverage/ Dessert	Not Configured	Beverage/ Dessert (A/B Switchbox)
	6	Beverage/ Dessert (Lobby Side)	Not Configured	Beverage/ Dessert	Not Configured	Not Configured
	7	HOTG	Not Configured	HOTG	Not Configured	Not Configured
ORB	1	Order Ready Board	Not Configured	Not Configured	Not Configured	Not Configured
EPR	1	UHC	Fry/ Hashbrown	EPR increase/ decrease	Not Used	Not Used
	2	Bake Monitor	Not Used	Bake	Not Used	Thaw/Tempering Printer

Note: These tables represent a typical restaurant configuration. It is possible that your restaurant may differ slightly. See your OTP Pro for more information.

Not configured: Is capable of supporting additional configuration if needed
Not used: Does not support any additional configurations at this time



A/B Switchboxes

When a grill order is received, the A/B Switchbox determines if the slip prints at the breakfast or lunch printer on that side of the prep. The SSGP setup includes up to two A/B Switchboxes and up to four printers. If a restaurant has two Switchboxes, the system can support up to 4 printers. A/B Switchboxes can also be used for a BDAP setting.

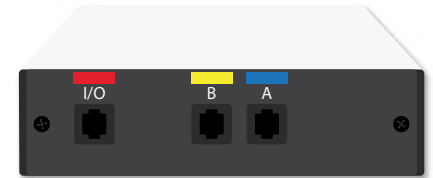
The Switchbox has three ports on the back:

- The **I/O Port** connects to the controller.
- **Port A** connects to the lunch printers, which are located closest to the bun toasters.
- **Port B** connects to the breakfast printers, which are located closest to the HLZ area.

When the A/B Switchbox knob is set to:

- **A:** Grill slips print on the lunch printer for that side.
- **B:** Grill slips print on the breakfast printer for that side. An easy way to remember this is the B is for Breakfast.

Note: Your restaurant may be labeled or configured differently.



PAR Parallel Switchbox



Depending on the controller, you may find these connectors and adapters are used to connect this model to the controller.



USB to Parallel

(From controller to IC-145R adapter)



Centronics to USB

(From printer to IC-145T)



PAN RJ14 Switchbox



An RJ14 cable is used with this switchbox model.



RJ14 Cable

These ATEN adapters connect a parallel printer to an RJ 14 cable. This allows it to connect to the A/B ports on this switchbox or the controller so that it connects to the I/O port.



IC-145R



IC-145R (Centronics)



IC-145T



PAN USB Switchbox

Note: The color of this switchbox may be different from those in your restaurant.



Depending on the KVS controller used, these connectors and adapters may be found in your restaurant:



RJ45 to USB Female



RJ45 to USB Male



RJ45 to USB (RJ45 End)



RJ45 Cable*



DB25 Parallel to USB



USB A to B Cable



USB to Centronics Cable



Parallel Cable

* This cable's color may vary.



Connection Example

The connectors used vary based on your printer brand/model and current setup. This example shows connecting to a KVS Controller as well as using a USB A to B connection for an Epson printer and a USB to Centronics connector for an Ithaca printer.

Note: The Ithaca 9000 can be converted to a USB printer by removing the Centronics connector.

Additional Resources for Controllers

Controller Replacement Video:

<https://otp.mcd.com/video/577/view>





Controller Models

NP6 restaurants support these controller models. Tap a controller to learn more.



NCR KC4



HP T630



Lenovo M625Q

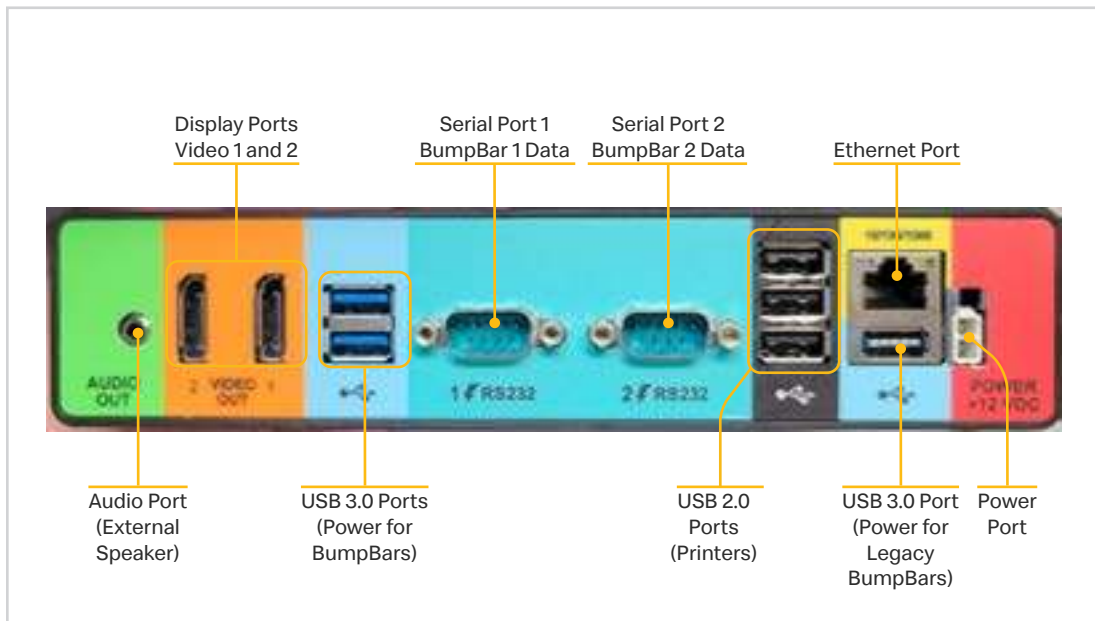


NCR KC4 Controller



Front

Note: The KC4 does not have a parallel printer port. Printers connect to a USB port using a USB-to-Parallel adapter. If using a USB printer, use USB A to USB B printer cable.



Back

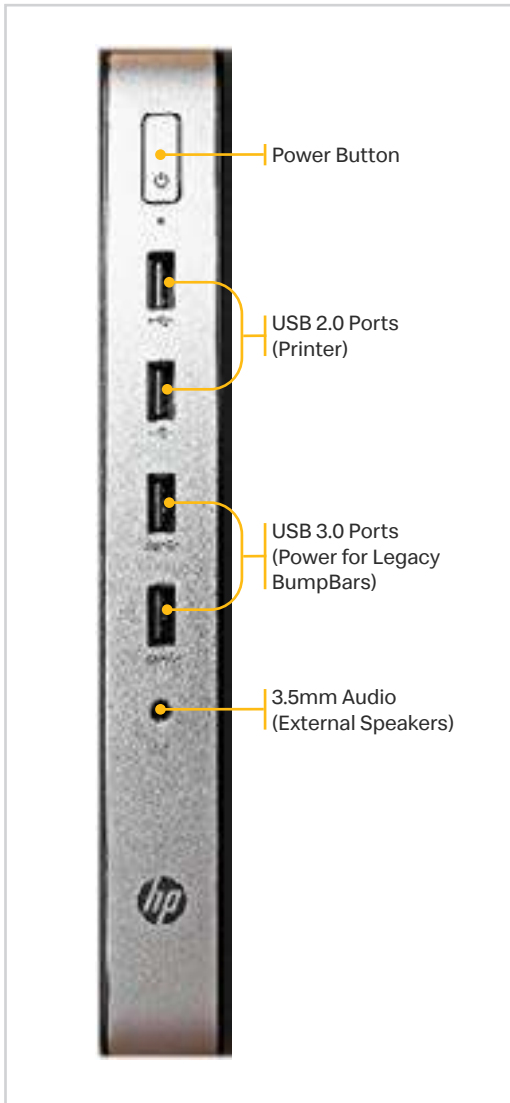
Note: The KC4 Controller uses two Display-to-VGA adapters to connect to VGA monitors.

This controller is compatible with Windows 10 Operating Systems.

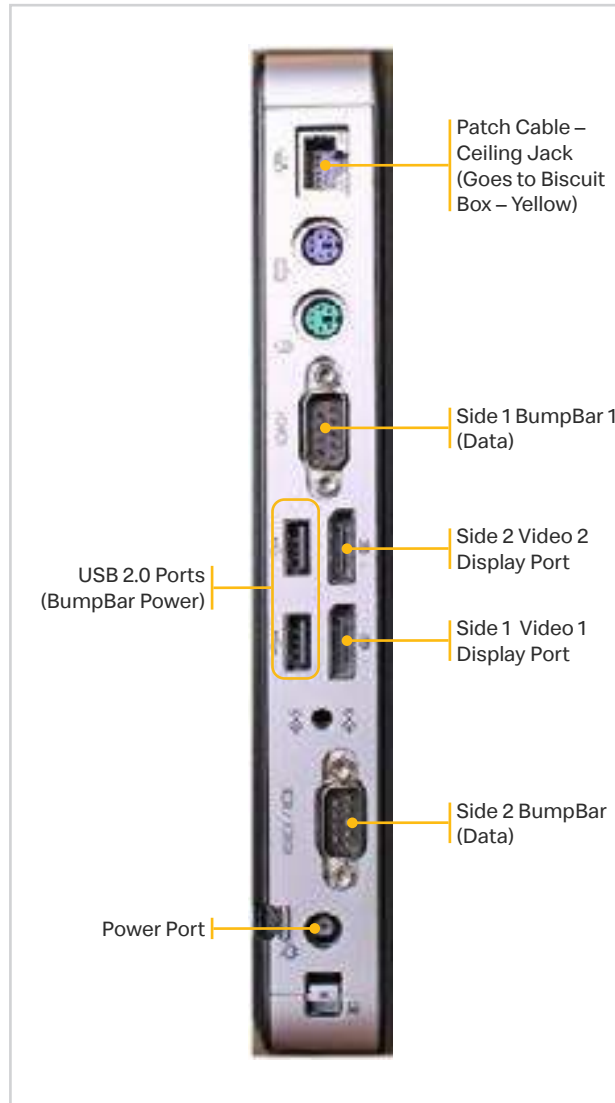


HP T630 Controller

The HP T620 has two USB ports on the back. If more than two USB devices need to connect to this controller, use the front USB ports. For printers, use one of the USB 3.0 ports.



Front

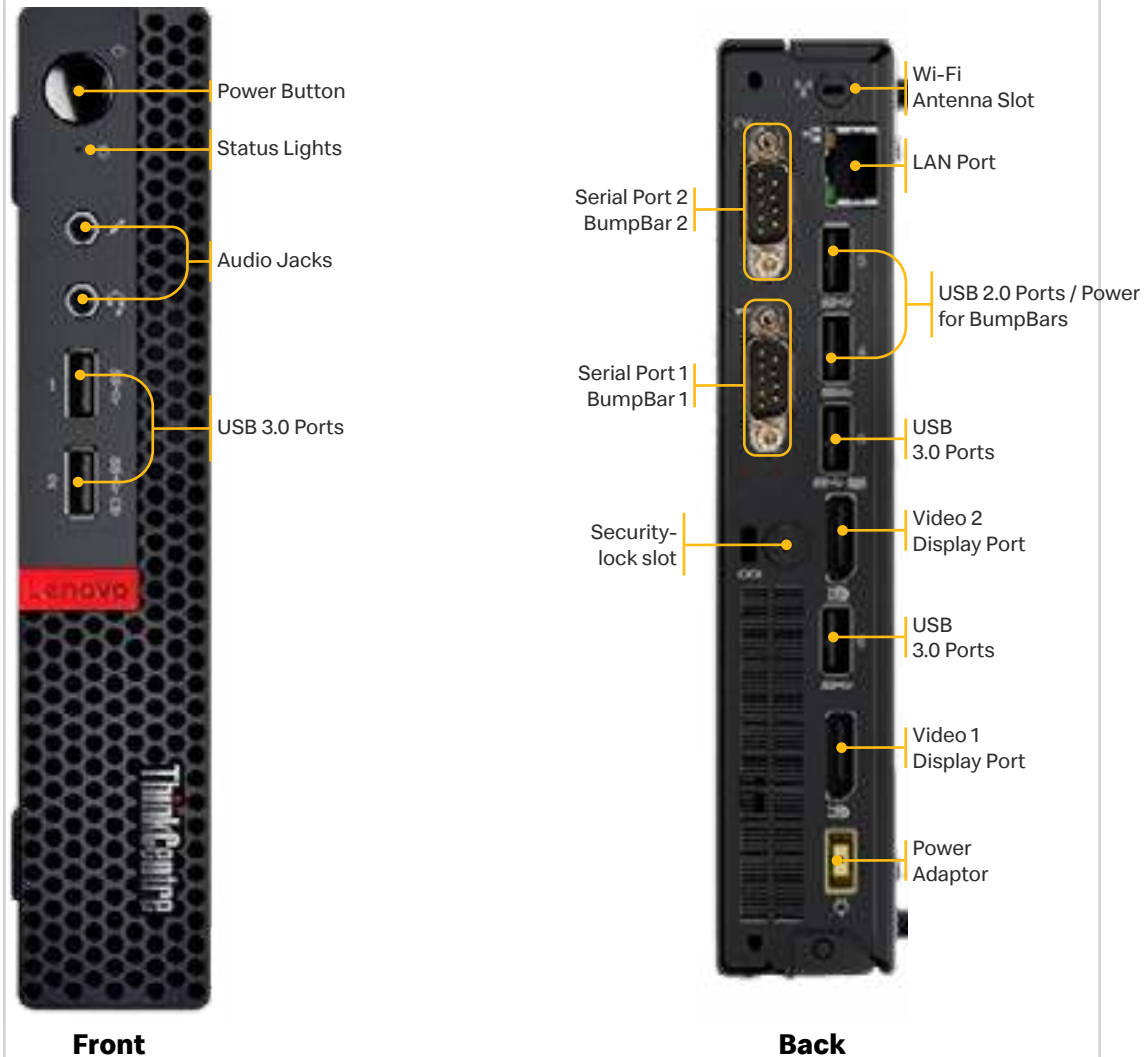


Back

This controller is compatible with Windows 10 Operating Systems.



Lenovo M625Q Controller



This controller is compatible with Windows 10 Operating System.



Cashless 3.0

The Cashless 3.0 system enables Payment Entry Devices, or PEDs, to communicate directly to the credit card processor. These devices:

- Are independent and process their own transactions.
- Use software to communicate and are paired with a POS device that can accept payment.
- Have a global IP address so they can send transaction data to the credit card processor.
- Are connected to the credit card processor using end-to-encryption, which prevents third-parties from accessing data while it transfers from the PED to the credit card processor.

Note: To learn more about IP addresses, see the Network 2.0 section.



OTP1 Refresh

- PEDs are used for cashless payments. Credit and debit cards are swiped or inserted into PEDs. These devices accept contactless payments like Apple Pay and Google Pay. They also accept Arch Cards.
- PEDs are connected to the Multiport Cable in two ways. This cable supplies power to the PED via an AC adapter, and it connects to the PED via a communication module. The Multiport cable also plugs into the green Network Jack on the Biscuit Box.
- **Note:** If you have any questions about the communications module, ask your OTP Pro.
- If a cashier is logged into the register, the PED screen is blue and displays the McDonald's Arch as well as says "Welcome to McDonald's."
- If a PED is not functioning correctly, confirm that nothing has been inserted into the slot-chip reader or card swipe. If you see an object in the chip reader, follow your organization's escalation process. There are special steps that need to be taken to remove those objects.





PEDs



MX-915

Verifone PED



e285

Verifone PED for HHOT



P400

Verifone PED for Register 13

Note: The following steps are for the MX-915 PED. For specific steps for the other devices models, please refer to the documents below:

- **E285 Installation Support Guide**

<https://otp.mcd.com/documents/3dd3cd52-72d9-409c-883a-d84328914b83/download>

- **P400 Installation Support Guide**

<https://otp.mcd.com/documents/716fe249-287a-4882-a3b1-188c6d41294d/download>



IP'ing or Re-IP'ing a PED

If installing a new PED, you need to set its IP address. You also need to enter its MID, TID, and LANE ID and pair the device with its Register or Kiosk. These processes are described later in this section.

You also need to Re-IP a PED when you need to confirm its IP address or move the PED to another location within the restaurant. These steps are similar to setting a PED's IP address.

Important: These instructions cover how to set a PED's IP address, but when you need to understand where the processes differ, the Re-IP'ing steps are included too.

- 1 To install a new PED, plug the PED into the Multiport Cable. Then, plug the AC adapter into the PED to power it up.

Important: If Re-IP'ing the PED, you need to reboot the PED.



- 2 As the PED software loads, the Select App to Run screen appears for four seconds.

Tap DEVIPReg9xx.exe.

Tap RUN!



- 3 The App Launcher screen appears. You do not need to do anything on this screen.



- 4 When the Device Registration App screen appears, tap Change.



Steps continue on next page.



- 5** On the Enter Device ID, enter the two-digit register number the PED is going to be associated with. Press Enter.



- 6** The Device Registration App starts to run. Tap Apply Setting.



- 7** Tap Restart to reboot the PED.

Notes:

- If Re-IP'ing a device, note the IP address that appears on this screen.
- If installing a new PED, continue to the MIDs, TIDs, and LANE IDs section.





MIDs, TIDs, and LANE IDs

When installing a new PED, you need to enter these numbers:

- **Merchant Identification (MID):** Each Restaurant has a unique six-digit MID that is associated with the National Restaurant Number. All P400 model PEDs in your restaurant use the same MID. Also, you need to need the MID twice during this process.
- **Terminal Identification (TID):** Each PED also has a unique two-digit TID, which is associated with a specific PED. If the TID is a single digit number, you must enter a zero before the number such as 05.
- **LANEID:** This is the Register number the PED is associated with. You must enter two digits. If the Register is a single digit number, you must enter a zero before the number such as 05.

IMPORTANT:

- Before you enter a TID, you must check with your OTP Pro to confirm the TID is free to use. Your OTP Pro will need to run a MOST script, a topic covered in the MOST Pro Prerequisite class. If your OTP Pro is not available, the credit card processor (FiServ) can confirm TID information.
Note: FiServ 800-767-3607, you MUST have your MID available when contacting
- Once you enter this information, the MID/TID combination cannot be used on any other device.
Note: Once a TID is used, it cannot be used on another device unless it has been released. Contact your OTP Pro for more information on the TID release process.
- This process requires that you run a test transaction. You must use a branded credit card for this transaction. It will immediately be reversed and will not show up on the bank or credit card statement. Do not use Apple Pay, an EMV chip, a Gift Card, or a contactless card for this process.
- If you experience any errors during this process, see the Troubleshooting section of this section.

- 1 After the device IP setting process is complete, the PED prompts you to enter the MID.
- 2 On the Re-Enter MID screen, input the MID again, and press Enter.



- 3 Input the TID on the Enter TID screen, and press Enter.

Important: Remember, you must always check with your OTP Pro before entering a TID.



Note: Use the keypad not the touchscreen to enter the MID, TID, and LANEID.

Steps continue on next page.



- 4** Then input the two-digit LANEID on the Enter LANEID screen, and press Enter.



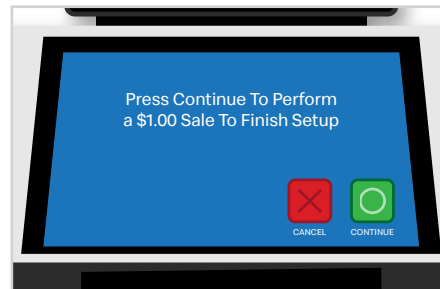
- 5** The next few screens show that the PED is registering with the processor, verifying connectivity, and executing a background test transaction.



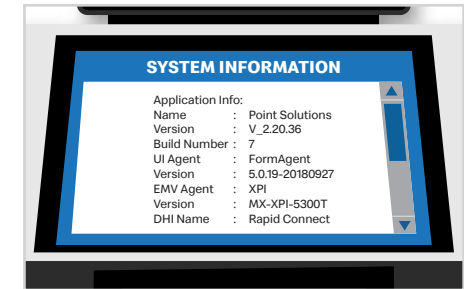
- 6** The PED asks you to perform a \$1.00 test transaction to complete the setup. Tap Continue.

IMPORTANT: You must use a branded credit card for the test transaction. Do not use Apple Pay, an EMV chip, a Gift Card, or a contactless card for this process.

The test transaction will immediately be reversed and will not show up on the bank or credit card statement.



- 7** When the transaction is successful, the System Information screen appears.



- 8** The PED screen displays a blue screen with the McDonald's Arch.



Next, continue to Pairing PEDs to Registers and Kiosks.

Note: If the test transactions fails and the screen displays "Do you want to try again?", follow your organization's escalation process.



Pairing PEDs to Registers and Kiosks

Pairing is a software method used to allow the PED to get order information from the register or kiosk. You need to do this setting up a new PED and when a PED and register or kiosk lose their pairing or when moving the PED to a different location in the restaurant.

Important: The PED must be paired and opened before they can run a live transaction.

During this process, the POS displays a code that you need to enter into the PED.

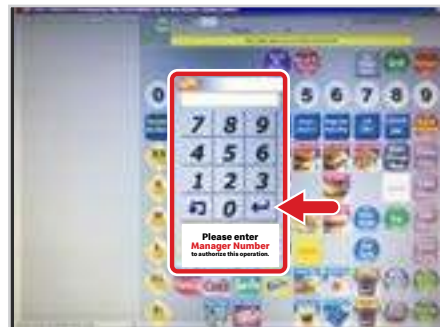
- From the time the code displays, you have two minutes to enter it into the PED.
- If pairing a PED to a kiosk, consider asking someone to help you.
- If working alone, write down the code or take a picture of the code with your phone, and then quickly enter it into the corresponding kiosk.
- The pairing code contains letters and numbers, but the letter “o” is never used, so do not confuse this character with a zero.

- 1** Tap Manager on the POS main menu screen.



- 2** If your restaurant is equipped with a biometric reader, you can use this device to log in.

If your restaurant does not use a biometric reader, you need to: Input the Manager Number and password, and then tap Enter.



- 3** On the Manager Menu screen, tap Support.



- 4** In the Support menu, tap Support.



Steps continue on next page.



- 5** Enter the daily support password, and tap Enter.

Note: If you have any questions regarding the daily support password, see your OTP Pro.



- 6** From the Support Operations screen, tap Cashless Maintenance.

Note: When pairing PEDs from a kiosk, you would tap Pair Kiosk.



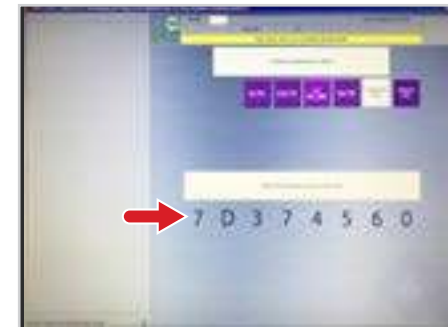
- 7** On the Cashless Maintenance Menu screen, tap Pair PED.

Important: From this point, you have two minutes to complete the pairing process.



- 8** An eight-digit code appears on screen. Write down the code, or take a picture of the code with your phone, and then quickly enter it into the PED.

Tip: If pairing to a kiosk, consider asking someone to help so the process does not time out.

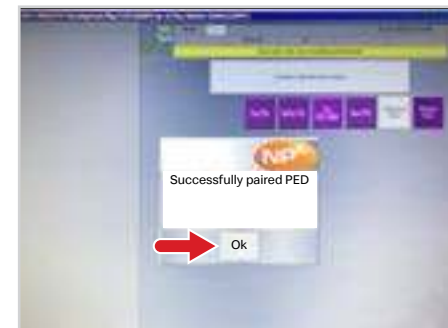


- 9** Use the PED's on-screen keyboard to enter the code, and tap Enter.

Remember, the code never includes the letter "o," but it may contain zeros.



- 10** When the pairing is successful, the register displays a message indicating it has been paired to the PED. Tap OK.

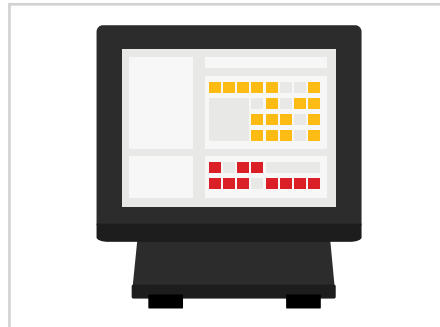


Steps continue on next page.



- 11** If pairing to a new PED, as a final verification that everything is working as expected, you need to confirm the MID and TID are installed correctly.

First, execute a transaction on the register for the new PED.



- 12** The MID is printed at the top of the information at the bottom of the receipt.

Compare the MID on the receipt to the number that was provided to you from your OTP Pro, the MOST MID/TID Check query, or another receipt from a different PED in the restaurant.





Rebooting a PED

If a PED is not working as expected, you may need to reset it by rebooting it.

- 1** To start this process, press the X and O keys at the same time until the screen goes dark and the blue runway lights come back on.

Then, release them.



Swapping a PED

This example is for exchanging functional PED on Register 1 with the PED on Register 13

1. Unpair both PEDs that will be swapped
2. Remove and unplug the PED from the stand on Register 1
3. Plug in the PED to the PED connection module for Register 13
4. Place the PED on the stand for Register 13
5. Set the IP of the PED on Register 13
6. Pair the PED to Register 13
7. Open the PED from the Cashless Maintenance Menu
8. Confirm the PED is functional by executing a test transaction

Note: If setting of the IP fails, refer to KBPART0103905 Manually IP the Network 2.0 PED

Cashless 3.0 PED Swapping & Common Swap Scenarios: <https://otp.mcd.com/documents/d87d4494-4572-43f1-a815-d5924aa8d6bc/download>



Store and Forward

When a PED loses connectivity, it begins to Store and Forward, or SAF, transactions. This setup allows the PEDs to continue communicating to the registers so that your restaurant can still take orders made with a credit card. When SAF'ing, PEDs store transactions until connectivity is restored. Then, they forward the transactions to the processor.

IMPORTANT:

- You cannot take Arch or debit cards when SAF'ing.
- If you see that a that PED is SAF'ing, follow your organization's escalation process.
- You cannot take credit card transactions greater than \$25.

- 1 To see if a PED is SAF'ing, tap SAF Status in Cellphie.



- 2 The SAF Status screen shows the maximum SAF that a PED can store as well as how much of that storage has been used.

Note: If Used SAF shows \$0 for the PED, it is not SAF'ing. If the restaurant is not SAF'ing, no information will be shown on this screen.

See the *Troubleshooting Connections* in this section as well as the *Network 2.0* section for additional troubleshooting.





Troubleshooting

If a PED is not working correctly, try the following solutions to see if the PED starts working again. If it does not, follow your organization's escalation process.

Connections

If a PED is not working correctly, it may not be connected to the rest of the network properly.

Confirm that:

- The green network cable is connected to the green network jack on the biscuit box and to the ethernet port on the Multiport Cable.
- The patch cable is working correctly. To test the patch cable, replace it with a working patch cable. If the PED starts working again, the patch cable is bad and needs to be replaced.
- The brown Multiport cable is working by using a spare cable. If the PED starts working, the brown Multiport cable is bad and needs to be replaced.

Error Messages

This section contains common PED errors and provides possible solutions. If the proposed solution does not work, follow your organization's escalation process.

When Setting Up a PED

If the PED...	Then...
Boots up to a screen that says <i>Failed to Initialize SCA Application</i> . Please Contact Admin when setting the IP address	Reboot the PED and attempt the steps again. If behavior does not change after the reboot, follow your organization's escalation process.
Freezes and displays <i>MID/TID Parameters Missing in Configuration....Please Download</i>	The process was likely canceled out when entering or re-entering the MID or the LANE ID. Reboot the PED.
Displays <i>Configure Network Setting</i> after successfully installing a PED	Confirm the register location of the PED (Device ID). The device ID entered when setting the IP MUST be unique. Reboot and re-IP the PED. Attempt to pick up where left off in the process.
Displays <i>VSP Reg Failed</i> for approximately two seconds and then the Configure Network Setting screen	The incorrect MID/TID combination or a MID/TID combination is already in use. Follow your organization's escalation process.
Displays <i>Want to try again?</i> after completing the test transaction	<ul style="list-style-type: none"> • Use a correctly branded card for the test transaction. Reboot the PED, and retry the transaction with a branded Master Card or Visa debit/credit card. • The restaurant's network connectivity is down. Once connectivity is restored, reboot the PED, and retry the transaction with a branded Master Card or Visa debit/credit card.
Displays <i>Configure Network Setting</i> when Cancel is pressed on the test transaction	Reboot the PED, and try to complete the installation process. If this does not work, follow your organization's escalation process.



Other Messages

If the PED...	Then...
Is powered on and displays <i>ERROR: FILE MISSING!</i>	Follow your organization's escalation process.
Is powered on and displays <i>Maintenance Required - UT</i>	
Freezes at a screen that says <i>Unable to bring network up DHCP failed EXITING....</i>	<p>The PED is not correctly connected to the network.</p> <p>Check the network connections, verify the restaurant has connectivity, reboot, and try to set the IP address again. If the error appears again, the restaurant has a networking issue.</p>
Freezes and displays <i>XPI FATAL ERROR</i> when rebooting	Try rebooting the PED again.
Starts to frequently decline cards or has become unresponsive	Reboot the PED.



Software

McDonald's uses different software applications to help the restaurants and equipment run smoothly. These applications include cloud-based systems that managers use to perform Cash and Inventory functions, as well as Point of Sale (POS) applications. Use this guide to learn more about these processes and how to troubleshoot certain issues.

Server Applications

Cash & Inventory (C&I) and e*Timekeeping

Allows managers to perform functions such as:

- Count drawers
- Edit time punches
- Enter waste and inventory
- Open or close the POS
- Enter safe counts
- View and print reports
- Sync with Cloud for access from outside of the restaurant

BOS

Manager Configuration tool

- Allows you to enable or disable some NewPOS features if your OTP Pro is not available
- Allows you to enable Biometrics for NewPOS
- Allows you to enable DT Present Drink Panel
- Ensures that order information is routed to the appropriate monitors

Cellphie

- Use to perform tasks such as rebooting the Waystation VM
- Cellphie Touch Screen Calibration Utility
 - Can be used to calibrate touch screens
 - Can be used if the mini-orb monitor is not functioning properly

RHS

Waystation Virtual Machine (VM)

Responsible for running several applications and processes such as the Waystation application and Primary Production.

OTP1 Refresh

This is new territory for you. As an OTP1, you may have worked with the equipment and hardware, but you likely did not manage any software. As an OTP2, you'll learn how to identify software applications and troubleshoot and configure the POS system and more.



NP6 and NewPOS

The NP6, or NewPOS, system is not only a high-tech evolution of the cash register, but also, a platform for creating excellent guest experiences and enabling growth among our team members.

Some of the features NewPOS enables is:

- Kiosks
- Enhanced CODs
- Order Ready Board

This software is what tells a controller to display a certain screen such as a KVS, ORB, or eProduction screen and for a register to show the screen to take orders.

NP# (NP SHARP)

NP# is a collection of plugins that allow NewPOS to use newer devices and features. Some examples of this include:

- Biometric Readers
- Cashless 3.0 PEDs
- Mobile offer scanners
- Mobile ordering
- The ability to print receipts storewide

Primary Production

This is an application on the Waystation VM that is responsible for routing order information to KVS/Expo monitors and the ABS.



Restaurant File Maintenance

The Restaurant File Maintenance (RFM) application is a cloud-based application that facilitates the programming of certain NewPOS functions including:

- Menu key placement
- Pricing
- Setting the restaurant's hours of operation

Updating the RFM

RFM is accessed by your organization's RFM Administrator to make updates. Those updates are then packaged, given a unique ID number, and delivered to the restaurant via the network. The package should be applied at POS open on its effective date.

For any issues with pricing or key placement, reach out to your OTP Pro or RFM Administrator for assistance.

Product Outage

When a product or an ingredient has become unavailable/available, managers will need to add or remove them via the POS. This will then remove or reactivate the product on all devices:

- Kiosks
- POS
- Digital Menu Boards
- Mobile Order and Pay devices
- McDelivery

Product Outage Documents

[Legacy Product Outage](#)

[Product Outage by Station Group](#)

[Product Outage by Menu Item Group](#)

[Simplified Product Outage \(SP9\)](#)



Configuring the COD Routing on the Register

If a restaurant is configured for two Customer Order Displays (CODs), use the COD Routing screen to change the **COD routing configuration** on the **drive thru registers**.

Note: Integrated CODs (iCODs) have additional configuration restrictions which will be covered in **Scenario B**.

Scenario A: Two Traditional CODs

1 Tap the **Manager** key to access the Manager Menu.

2 Enter the Manager ID and Password.

3 Tap the **Manager Drive Thru Options** key.



4 Tap the **COD Routing** key.

5 The screen displays the current COD Routing.



6 Verify the COD is **enabled**.



Steps continue on next page.



- 7** To change COD routing settings for any drive thru register, tap the desired key in the row corresponding to the specific drive thru register.

- If a register is set to **non-dedicated**, a COD 1 and COD 2 button display on the order taking screen so the order taker can select the COD the order should route to.
- If a register is set to **COD 1**, all orders will route to **COD 1 by default**.
- If a register is set to **COD 2**, all orders will route to **COD 2 by default**.



- 8** Tap **OK**.

- 9** To reset to the default COD routing settings, tap the **Default COD Routing** key.

- 10** To determine the default COD routing settings, tap the desired keys in the rows corresponding to the specific drive thru registers.

- 11** Tap **OK**.

Scenario B: iCODs

- 1** Make sure used **CODs** are set to **Enabled**. Update dedicated/ non-dedicated settings, if desired, per restaurant preference. Tap **OK** to save settings.

Note 1: Any drive thru registers logged in as a Cashier (CS) must be set up as Non-Dedicated within DT COD Routing Menu – otherwise, they will cause error(s).

Note 2: Restaurants cannot have any register logged in as a Cashier Order Taker (CO) – otherwise, it will cause error(s) – especially for restaurants with iCODs.



- 2** Return to the COD Routing Menu to confirm the settings were saved. If correct, tap **OK** to exit.

- 3** Test a new order sent to affected iCOD(s) to confirm resolution. If working properly, the iCOD display will appear at the bottom left menu panel of the affected Outdoor Digital Menu Board (ODMB). The order status should appear once the order is in progress.



Printer Redirection

You can change the default printer to another printer with the following steps:

- 1 Tap the **Manager** key.
- 2 Enter the Manager ID and password.
- 3 Tap the **Support** key on the Manager Menu to access the **Support Menu** screen.
- 4 Tap the **Set Default Printer** key.
- 5 Highlight the **printer number** for the **new default printer**.

- 6 Tap **OK**.



- 7 You have updated your default printer.

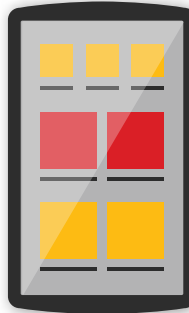


Miscellaneous Equipment

Tap a piece of equipment to learn more about it.



e*SmartClock



IDMB / ODMB



HHOT



NCR P1235 e*SmartClock



Power Button

Display Port

Power Cable Port

Network Port

Printer Port
(Power Over USB Cable)

Biometric Reader Port

OTP1 Refresh

e*SmartClock

- The Crew and Manager's scan their finger on the e*SmartClock to clock in and out for shifts. If the e*SmartClock is not working, the crew cannot punch in or out for their shifts. This may require another way to track time until the e*SmartClock is working again.
- The e*SmartClock is connected to a biometric reader and a printer. If the printer is used, employees receive a printout of their time punches to keep as a record.
- There is only one e*SmartClock per restaurant, and its location may vary depending on the layout in your restaurant.



Troubleshooting the e*SmartClock

If...	Then...
The e*SmartClock device does not power ON	The power cord connection may not be connected properly. Remove the cable cover to reveal the ports. Ensure the power cable is connected properly.
The Biometric Reader is not working	If the blue light on the biometric reader is not flashing blue, reboot the e*SmartClock. If the indicator lights do not flash blue after the reboot, raise the issue to your OTP Pro. OTP2s can also try to reseating the USB cable.
The printer has an error	<p>You need to confirm that USB printer is selected in the e*SmartClock System Maintenance screen. Before you begin this process, best practice is to reseat (unplug and plug back in) each end of the cable to ensure that the problem is not a loose cable.</p> <ol style="list-style-type: none"> 1. Touch Admin. 2. On the Manager Login screen, input the Manager ID and password. 3. Tap Close Application. 4. On the pop-up window, tap OK to confirm you want to close the application. 5. On the System Maintenance screen, tap Printer. 6. Tap EPSON printers. 7. Save and exit the application.
The connection to the BOS cannot be found	<p>Ensure the:</p> <ul style="list-style-type: none"> • LAN cable is firmly plugged into the network port and that the network LED network indicator is flashing green. • Network cable is connected to the POS network switch. <p>If the problem continues after checking the cables, raise the issue to your OTP Pro.</p>



IDMBs (Indoor Digital Menu Boards)

Your restaurant may have four or five media players. Depending on the model, the front of the player looks like this:



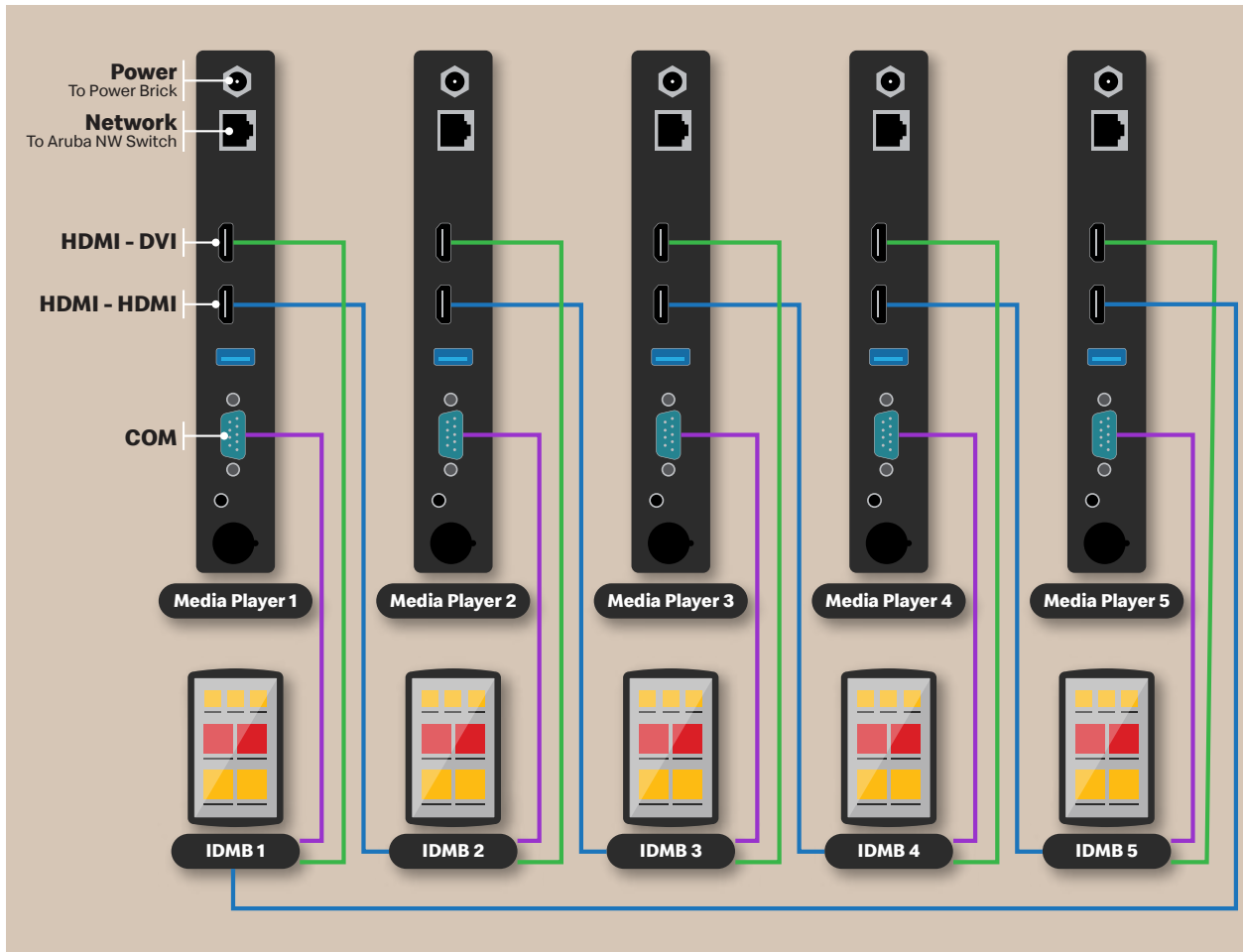
OTP1 Refresh

IDMBs

Indoor Digital Menu Boards (IDMBs) are large display signs that show the restaurant's pricing as well as images of featured items or Limited Time Offers. The IDMB gets its content from a media player, which controls what the customer sees on the IDMB. These players are located behind the IDMBs or on the back side of the wall the boards are mounted on.



IDMB / ODMB Connections



The five media players are connected together, which allows another IDMB to act as the failover for another player. This method of connection protects from complete failure.

Let's use Player 1's connections as an example:

- **Power:** This port connects to a power brick.
Note: The AC adapter has a screw collar to prevent it from being unplugged.
- **Network:** A Cat 5 cable connects the media player to the Aruba Network Switch.
- **HDMI - DVI:** These ports connect to IDMB 1.
- **HDMI - HDMI:** Player 1 is the failover for IDMB 2, so this port connects to IDMB 2.

As you look at players 2 through 5, you can see how each player connects to its IDMB as well as acts like a failover for the next IDMB.

Note: Player 5's failover is IDMB 1.

Each ODMB has a media player inside of the housing as well that may need to be rebooted or cables reseated if communication is not happening

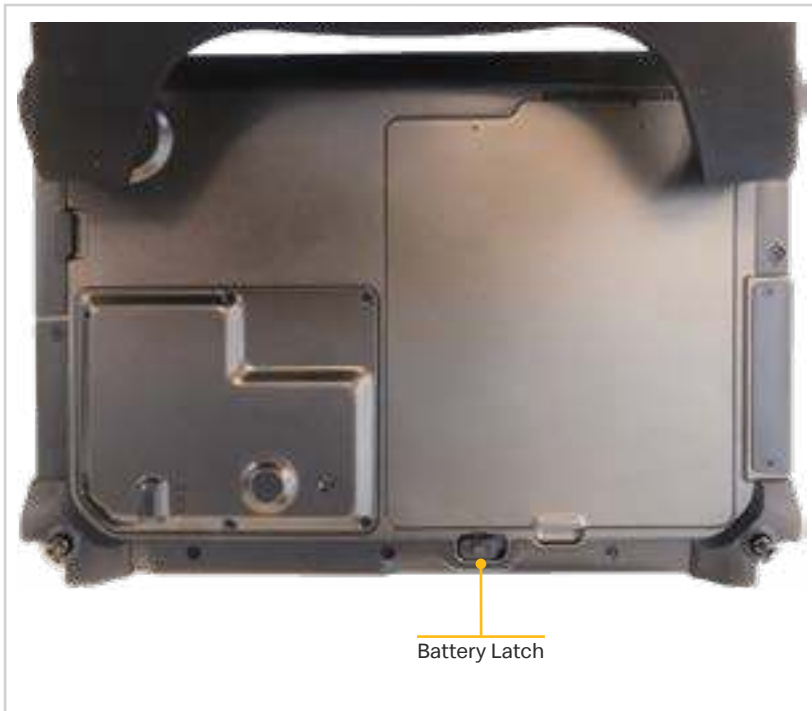


HHOT (Handheld Order Taker)



A keyboard and mouse plug into the USB ports on the left side of the HHOT or on the HHOT docking station.

Note: A keyboard and/or mouse may be used by your OTP Pro to change settings on the HHOT.



Battery Latch

HHOT Back



USB Port
(Keyboard
and Mouse)

HHOT Left Side



Power
Supply Jack

Network
Jack

USB Ports
(Keyboard
and Mouse)

Docking Station Back



Checking HHOT Connectivity



While the HHOT is in the dock:

To confirm the HHOT is online, tap Options on the Main screen.

Validate the top of the MOT shows "Waystation Online". If it



While the HHOT is not the dock:

The screen will go through several red NewPOS loading screens. If the screen stays at 100% loaded but did not change to a register screen, the device does not have



Rebooting the HHOT

If the HHOT is not functioning properly, you may need to reboot.

- 1 While in the docking station, click Options
- 2 Tap the Support tab.
- 3 Tap Restart.

Note: If the reboot doesn't start, hold the Power button for 2 seconds for the device to power down. The HHOT will automatically turn back on, so you do not need to press the Power button again.



- 1 If not in the docking station, click Manager
- 2 Enter the Manager Credentials.
- 3 Tap Manager Options
- 4 Tap Restart POS
- 5 Tap Okay





Battery Management & Charging

Managing the HHOT's battery is very similar to managing the battery in your phone. If the battery indicator lights are red, connect the AC adapter to the tablet so that you can charge the battery.

Replacing the Battery

If the power indicator or battery indicator is not lit, the HHOT battery may need to be replaced.

Note: Before you do this, ask you OTP Pro for a fully charged battery.

- 1 Unhook the upper left and right strap from the corner standoff screws.



- 2 Slide the battery latch to the left.



- 3 As you slide the battery latch, pry the battery upwards.




- 4 Pull the battery out at a 35 to 45 degree angle.



- 5 To install the battery, insert the battery at a 35 to 45 degree angle, slide the battery latch to the right, and rehook the upper left and right strap to the corner standoff screws.



Troubleshooting the HHOT

If...	Then...
The HHOT will not resume from sleep or will not turn on	Hold down the Power button for two long seconds
The screen needs to be rotated 180 degrees	<p>When a Crew Member is using the shoulder strap, the screen orientation may need to be rotated 180 degrees. Navigate to Options, and then select Preferences. Then, select Rotate Screen.</p>  <p>You may need to select Rotate Screen several times until the screen looks the way you want it to.</p>



Troubleshooting

Troubleshooting is a big part of your job as an OTP. You'll find some guidelines and helpful tips here to help you along.

To think – and perform – like an OTP, you need to:

- Know the steps to follow
- Know which questions to ask
- Know where to go for help

We also want our OTPs to **be proactive**. So, keep a close eye on devices and technology when you do your Weekly Technology Travel Path (WTP). Clean the equipment and note any issues or potential issues. Check cabling as you go to make sure there are no loose connections.

The 7 Steps of Troubleshooting

These seven steps encompass a lot of information. Try to approach each issue by following this sequence because it will ensure you start the process in the right place – identifying the problem – and ensure you gather all the necessary information to come up with the right solution – one that lasts.

Remember, it takes a lot of takes a lot of knowledge and practice to use reasoning when working help desk calls or in the field on an installation. Be patient with yourself as you learn and grow as an OTP. You will build your knowledge base with time and experience. It can be frustrating at first, but that's why there is a process to follow and so many resources to help you learn your way. Learn from your mistakes and keep going!



- 1 Identify the Problem:** The key to identifying a problem is to ask questions. Usually you can get there with only a couple of questions. Once you identify the basic problem, narrow the scope.

Note: Information on asking the right questions will be covered later.



- 2 Gather Data:** Gather specific data related to the problem. Again, this is often accomplished by asking the right questions. And never assume when gathering data. For example, don't assume a device is turned on. Be careful here because too much data can be a problem itself. Keep it clear and concise.



- 3 Identify Possible Solutions:** Next in the process is to use the information from the first two steps to identify possible solutions. It is best to start with the simplest solutions and then go to more complex solutions.

Note: Pay attention to your surrounding environment – the level of service – as you gather data. If your crew and customers are better served by your helping speed production along immediately and fixing the problem when service is slow, do that.



- 4 Analyze Possible Consequences:** Remember Newton's Law: For every action, there is an equal and opposite reaction. Keep this in mind when you confront a problem. A simple solution may work on the surface, but underneath a larger problem could be developing. Weigh all solutions and their consequences before making judgment. When deciding where to start, consider what the action(s) will have on the overall system. Example: Restarting the RHS would take the system down.



- 6 Monitor and Modify if Needed:** After trying the best solution, monitor its progress. Make sure everything is working properly. This step could take anywhere from one minute to five days – even five weeks. If everything works properly, the job is done. If everything does not work as planned, it is time to start all over again with step one.



- 5 Choose the Best Solution:** The best solution may not always be the first solution. And typically, there will be more than one solution for each problem. Finding the best is a judgment call. It comes from knowing the system, its components, how the software interacts with the hardware, etc. Start with the easier, less invasive solution first. Test your solution before fully implementing it. That will help you stay your course and avoid needlessly jumping around from solution to solution.



- 7 Get Help if Needed:** If there's no apparent solution to your problem, please get help as soon as possible. Remember the real bosses here – the customers, internal and external. The longer the problem drags on, the more difficult it becomes for crew members to satisfy customers. If it takes five days to get a five-minute problem solved, the end-result may be correct, but to your crew and the customers they serve it may be a failure. Use your resources, which include the Help Desk, the OTP Community, your online resources, and your Reference Guide. There are lots of resources available to you!



Asking the Right Questions

A key part of finding a solution for a problem – steps 1 and 2 in the Troubleshooting process – is knowing how to ask the right questions.

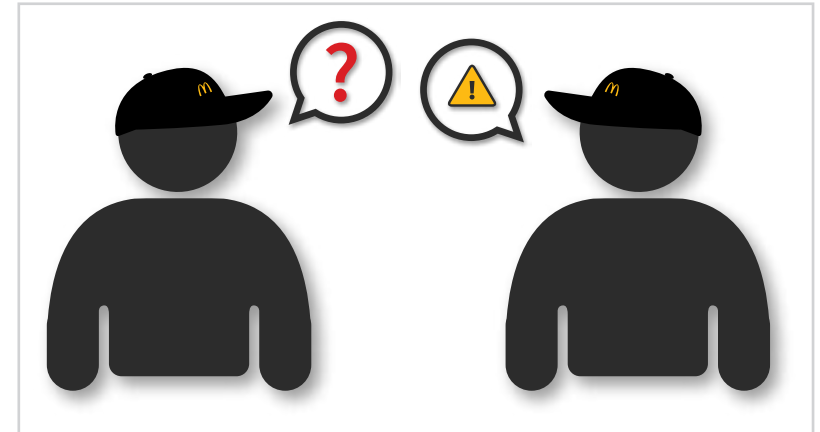
When you are approached by a crew member about a problem, first ask them some basic, easy questions. For example, start with: “What seems to be the problem?”

Here are some tips to asking questions so you can solve your problem:

- Ask open-ended questions to gather as much information as possible
- Ask basic, easy questions
- Do not ask leading questions suggesting an answer; let them do the talking
- Try to find the answer to these questions:
 - When?
 - Where?
 - How?
 - Why?

Once you have asked the basics, start to narrow the scope by asking questions like:

- Which device(s) are affected?
- Is the problem only affecting one device or is it system-wide?



Rebooting Equipment

When absolutely necessary, you can reboot a device. Follow the instructions here.

- **Power Cycling:** When power cycling a device, only press the power button down for one second.
- **Going through the POS Manager’s menu:** See your OTP Pro if you do not know how to do this process.



Other Helpful Resources

In addition to this Reference Guide, there are other helpful resources available to you. They include:

- The Help Desk
- Your OTP Pro
- The OTP Community: Reach out on the community board on the Portal
- Knowledge Articles: Specific topic-related articles shared on the ATOS ServiceNow area of the OTP Portal.

Here's how to access the **Knowledge Articles**:

1. Access the Portal
2. On the homepage, select ATOS ServiceNow
3. Once on ServiceNow, tap Knowledge Search
4. Search the articles by topic

Tips: Narrow your search results by including as much information as possible, such as “register” and the brand or model your store uses. You can also search the symptoms of your issue.

Knowledge Articles will include troubleshooting steps for the issue you have searched and selected. Each article includes a KB number which can be used to reference the specific article. You can also leave feedback in the comments section at the bottom of the article to help improve the information.